The Hunterian Lecture
ON
THE TREATMENT OF DYSENTERY.

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GENTLEMEN,—I must begin by thanking you for the honour which you have bestowed in inviting me to address you to-night. I understand that I am the recipient of this favour chiefly because I had the good fortune to be selected some six months ago as Gresham Professor of Physic, and I can assure you that my six professorial colleagues at Gresham College and I fully appreciate this courteous evidence of the fraternal feelings of the famous and historical Hunterian Society. I will not labour to force a comparison or a contrast between Sir Thomas Gresham, the wealthy City merchant, to whom London is indebted for the first Royal Exchange and the ancient foundation of Gresham College, and John Hunter, who left us knowledge beyond all price, the nucleus of the best surgical museum in the world and memories which this society has invariably kept bright and untarnished. Though two centuries separated their lives I may permit myself to remind you that there were certain points of resemblance between the two men; both served their country well on the European continent as well as at home; both were distinguished for extraordinary diligence and for being innovators far in advance of their colleagues; and neither of them was apparently so fully appreciated during life as after death. When I received the polite invitation of your secretary I learned that I was at liberty to choose my own subject, and after some consideration I decided to address you upon some of the practical points connected with the treatment of dysentery, a disease which half a lifetime spent abroad has given me a better opportunity of studying than can be the case of those whose work is confined to London.

Dysentery, some two centuries ago, was so common in Ireland that various writers called it "the country disease," but England has been innocent of both endemics and epidemics for many a long year. The single exception to this rule is that bacillary dysentery occasionally breaks out in overcrowded lunatic asylums or in any other institutions where certain laws of health have been neglected. Moreover, an outbreak of 170 cases and 38 deaths occurred at Aldershot in 1901, apparently due to importation from South Africa. I feel I have no need to offer you any excuse for choosing this subject to-night, because a large number of imported, half-cured, and sometimes wholly uncured cases are introduced into London every year and it behoves everyone engaged in clinical work to know how to treat these dysenteric wanderers from the East. But there is another reason for wishing to interest you in these imported individuals, and that is that chronic cases, some of them originally unrecognised, and called diarrhœa, others being mild cases not searching for treatment, are dangerous to the community even in a country like this which has practically no dysentery of its own. Each of the imported cases is, in fact, a "dysentery carrier," analogous to the carriers of enteric fever, whom we have all learned to distrust during the last few years.

The two chief varieties which I wish to discuss to-night are the bacillary and the amœbic, both of which may be either acute or chronic. These two varieties are practically now accepted by all modern workers on the subject and I do not propose to trouble you with the other forms about which bacteriologists are not yet agreed, for there seem to be various kinds of dysentery, just as there are various kinds of broncho-pneumonia. The diagnosis of dysentery is not difficult to those who have trained themselves to examine the excreta of their patients. If the physician neglects this obvious duty he has to trust to the account given him by the patient and he will often be deceived as regards the description of the stools, mucus, and blood. It must be remembered that tenesmus only exists when the lower part of the rectum is affected. The diseases most often confounded with dysentery are carcinoma, polypi, and syphilis of the rectum, hæmorrhoids, and, in those returning from the tropics, bilharziasis. Bacillary dysentery can be differentiated from amœbic dysentery. The following points should be remembered: (1) that amœbic dysentery, unless skilfully treated at the beginning, usually runs a chronic course, while the bacillary lasts only from four to eight days in mild cases and from three to six weeks in the serious ones; (2) that in the amœbic form no bacilli can be found unless you have, as is rare, but quite possible, a mixed infection of both amœbic and bacillary dysentery; (3) that toxic symptoms such as high fever, rapid emaciation, and nerve complications exist in bacillary dysentery, but not usually in the amœbic form; and (4) that liver abscess is a very frequent complication of amœbic dysentery and does not exist in the unmixed bacillary form. The conditions necessary for a certain diagnosis of bacillary dysentery are the positive agglutination reactions of the dysentery bacillus with the blood serum of the patient, or the isolation of the bacillus from the fæces of the patient, or from the organs after death. In order to form an opinion as to what the interior of the intestine is like it is well to examine as many stools as possible and to wash them repeatedly and deliberately with water until all fæcal colour has been removed. In a well-equipped hospital the ultimate result should be preserved in a covered glass dish for the physician and others to study.

BACILLARY DYSENTERY.

Let us first devote our consideration to bacillary dysentery. Nine years ago Shiga found the micro-organism now universally recognised as the bacillus dysenteriæ in the epidemic dysentery of Japan and proved its marked agglutination when mixed with the serum of patients. In 1900 Flexner and others isolated a bacillus from dysentery in the Philippines which corresponds very closely with that of Shiga, and in the same year Kruse discovered Shiga's bacillus in an epidemic of dysentery in Germany. Since then the bacillus has been recognised in many other parts of the world. One of the most interesting facts connected with it is that in cases of infantile diarrhœa, especially in the summer months, the dysentery bacillus has been found in the United States, Germany, England, Holland, and Japan. Several observers, under Flexner's direction, found this bacillus in 63 per cent. of 412 cases of summer diarrhœa in Boston, New York, Philadelphia, and Baltimore. According to Shiga himself, the principal difference between the Shiga-Kruse bacilli and the type from Manilla is that the former do not affect mannite (non-acid form), while the Flexner cultures ferment mannite (acid form), giving rise to a distinct acid reaction in the medium. To avoid errors the term dysentery bacillus must be taken to include several types which are closely related, but which show variation in fermentative and agglutinative qualities (Flexner). It is not always recognised how bacillary dysentery is conveyed to the individual, but Shiga quotes two cases which are of striking interest. After an epidemic had broken out in several houses in a Japanese village in 1900 it was proved that the well employed by all these households was infected with the dysentery bacillus. In another village in 1899 bathing in a certain river was forbidden, during the summer, because fish were being bred in it. When this prohibition was removed the men and boys of the village flocked to swim there, and in four or five days an epidemic of dysentery began. Altogether there were 413 cases, of which 115 were boys under ten years of age. It was then found that there had been an epidemic of dysentery in another village higher up the river and the water had been soiled by infected clothes. As a further proof I may mention that one of Dr. Flexner's assistants contracted a sharp attack of dysentery after accidentally introducing into his mouth a small quantity of fluid culture of the bacillus, in spite of thorough and immediate disinfection of the mouth.

Both in tropical dysentery and in the asylum cases seen in non-tropical countries it is not possible to obtain the bacilli as readily or in as large numbers from the stools as from the mucous membrane of the rectum. Flexner has taught us that gentle scraping of the rectal mucosa during life will yield material from which the bacillus may be recovered, and this knowledge is often useful for purposes of diagnosis. In all cases the bacteriological examination should be made as early as possible. The length of time that the dysentery bacillus may survive in the intestine is still doubtful, but there are cases on record which show that it may persist for many weeks after apparent recovery from the disease.

The bacillus apparently does not enter the general circulation but it has been isolated from the mesenteric glands and occasionally from the liver.

The treatment of the acute form in general respects is exactly the same whether the patient is suffering from the bacillary or the amœbic variety. Rest in bed is the first essential, with warm clothing, perhaps a hot water-bottle and certainly a pad of cotton wool on the abdomen surrounded by a flannel bandage. Physiological rest for the intestines, so far as possible, must be obtained by stopping all solid food and giving only small quantities of liquid every two or three hours. When the tongue is fairly clean boiled or sterilised milk, pure or diluted with rice water, or peptonised, is the best food. The daily examination of stools, as in enteric fever, will tell you whether you are giving too much milk or whether it is necessary to peptonise it. When the tongue is thickly coated or the patient loathes milk you may have to give chicken broth, albumin water, whey or rice water for a day or two. Alcohol will not help the dysentery and is bad for the liver, so should be withheld unless the heart requires it; brandy in such circumstances is the best stimulant. All food should be given tepid, neither hot nor cold, and even then a small judicious meal may cause immediate peristalsis and an action of the bowels. I have purposely dwelt upon these details because I want to impress upon you that you must treat dysentery just as carefully as you would enteric fever if you wish to cure the patient. The first drug to be given is something to clean out the bowel, and it is surprising how much fæces may be retained even when a man is passing as many as 30 motions in the 24 hours. It is always safe to assume that the patient, until he comes under your care, has been taking an improper diet. Castor oil in one dose may be given, or drachm doses of sulphate of magnesium, or one sixth of a grain of calomel every hour until a fæcal result is produced, which will usually be after four or five doses. The patient is allowed to drink simple acid lemonade or a solution of lactic acid (1 in 3000) to relieve thirst. Small enemata of saline solution will diminish tenesmus and this most troublesome symptom can also be checked by suppositories of cocaine, opium, or belladonna. When there is much hæmorrhage from the bowels an ice-bag is placed over the abdomen, opium is given internally, and enemata of iced water. It is hardly necessary to say that the bed-pan must invariably be employed whether hæmorrhage exists or not. Quinine must be given if there is any suspicion of malaria co-existing with the dysentery. For collapse the subcutaneous injection of normal saline solution is useful. Ipecacuanha and large enemata of silver nitrate or other salts are not useful here, though nitrate of silver enemata (1 to 1000) can be used in chronic cases. Shiga was the first to use serum treatment, which is bactericidal as well as antitoxic. An agar culture of the dysentery bacillus which has been maintained at incubator temperature for 24 hours is emulsified in normal saline solution and heated at 60° C. for half an hour. This mixture is then inoculated subcutaneously into horses beginning with small doses, gradually increased in amount. The following rules have been found to work well in Japan: (1) in mild cases the serum is injected into a patient in one dose of 10 cubic centimetres; (2) in cases of average severity the serum is injected a second time after an interval of from six to ten hours; and (3) in severe cases this dose must be repeated twice daily for two or three days.

By serum treatment an early case (second or third day) can be cured or greatly improved, the blood and mucus disappear, the pain and tenesmus cease, and the patient gets refreshing sleep. In later cases improvement is also seen but not so rapidly. By medical treatment alone patients recover in 40 days or die on the eleventh day; by the serum treatment they recover in 25 days or death is postponed till the sixteenth day. A polyvalent serum powerful against all types of dysenteric bacilli is more likely to be useful, because each immune serum is most active against its own type of bacillus. Preventive inoculation by the simultaneous method in which both the dead bacillus emulsion (heated at 60° C. for 30 minutes) and specific immune serum are simultaneously injected has been found very useful, for Shiga reports that he tried this method in one district of Japan where epidemic dysentery prevailed extensively, and he was able to diminish the mortality in the district from 20 to 30 per cent. to about zero. Professor Rosculet of Roumania also reports a successful experiment for the prevention of dysentery by serum. He injected five cubic centimetres of serum into 18 people living in houses in which there were dysentery patients. 18 others exposed to similar conditions were not injected and were watched as controls. No single person of the 18 injected became ill, while of the control cases 14 succumbed to typical dysentery.

The following method has recently been employed in India for the treatment of bacillary dysentery. First prepare a vaccine from a bacillus similar to that affecting the patient, whether Shiga or Flexner. Standardise it on rabbits and use it to inoculate the patient. Watch his opsonic index or, if that is impossible, repeat the inoculation at intervals of from ten to 14 days, being guided by the condition of the patient. This method is found best in the chronic form of the disease and is no use in acute cases because they are too fulminating. The inoculation should be made hypodermically and the most convenient site, as in anti-typhoid and other bacterial vaccines, is in the front of the chest about three inches below the clavicle. The inoculation should not be intramuscular, because then the local reaction is more painful and it takes longer for absorption to take place.

Rudnik at Bukowina and Karlinski in Bosnia have successfully treated cases of dysentery by means of serum obtained from Vienna. The latter reports that the mortality from dysentery during ten years varied from 18 to 27 per cent., and that the serum in 47 cases reduced this death-rate to *nil*. Skschivan and Stefansky also report favourable results from Odessa with serum obtained from a horse which had been immunised for one year with dysentery toxin, obtained by filtration from three-week-old cultures of Shiga's bacillus. A serum made by Rosenthal at Moscow has met with great success since 1903 in that city and its inventor claims for it that it reduces the death-rate more than one half, shortens the illness considerably, and prevents relapses and a chronic condition. Rosenthal's serum was also much used during the Russo-Japanese war. Korentchewsky reports that in 70 cases treated in the Kharbin Hospital which were passing 30 motions daily, 20 cubic centimetres of the serum banished the intestinal troubles in 24 hours. Barikin treated similarly 59 cases in an ambulance train in Manchuria and only lost one of them. He says that at the end of the first 24 hours the serum produced an effect which was almost miraculous. Six months ago, at a meeting of the Académie de Médecine in Paris, Vaillard and Dopter, two army medical officers, made a communication on the serum treatment of 243 cases of bacillary dysentery during the summer of 1906. Of the cases 43 were insane and 10 were children. Excluding the asylum cases, the remaining 200 were divided into 101 of average intensity, 74 serious, and 25 hopeless. Yet there were in all only 10 deaths, though six of the patients were already moribund when the serum was injected. The value of the serum was shown not only by the diminished death-rate but by the rapid relief and quick recovery of most of the patients. In a few hours the serum quieted the abdominal pain and tenesmus, diminished the number of motions, and gradually banished blood and mucus from the stools. The results were not quite so satisfactory in the 43 lunatics, seven of whom died. Dr. Vaillard, during the debate, described the case of a gendarme who had been suffering for several months from diarrhœa (from 7 to 12 motions daily), which resisted all treatment; the patient was sent to a military hospital, where a doctor found his blood agglutinated cultures of the dysentery bacillus, and thus established the diagnosis; serum was injected, the diarrhœa stopped in 24 hours, and was followed by constipation, the general condition rapidly improved, and in a few days the man was practically cured. Anti-dysentery serum bids fair to become in some parts of the world as useful as diphtheria and tetanus antitoxin. The Lister Institute of Preventive Medicine prepares an anti-dysentery serum, but I understand that during the last three years only about 200 doses per annum have been applied for, so that it does not seem to be used to any extent in this country for infantile diarrhœa or for asylum dysentery. The prophylactic dose is 20 cubic centimetres injected subcutaneously, while the curative dose is the same or more, according to the gravity of the attack. Experimentally the serum gives admirable results when tested on rabbits both as a prophylactic and as a curative agent. Todd, while working in the Lister Institute, was the first to show that a soluble toxin could be obtained from the Shiga dysentery bacillus and that the serum obtained by immunising with this toxin or with the dysentery bacillus had very marked antitoxic properties.

AMŒBIC DYSENTERY.

This variety is distinguished by most workers as a definite form of intestinal disease differing from other varieties of dysentery. Since 1859 amœbæ have been searched for in the

intestinal contents, and Koch in 1883 demonstrated them in sections of the intestine from those who had died from ulcerative dysentery. Since then Kartulis, a Greek doctor in Alexandria, found amœbæ in every one of 150 cases of Egyptian dysentery, while in 30 control patients suffering from other diseases he found no amœbæ. These records have been confirmed in the United States, Philippines, India, and elsewhere. The pathogenic variety is called amœba dysenteriæ, or, as Schaudinn proposed, entamœba histolytica. It is armed with tough pseudopodia, able to attack the epithelial cells of the intestine and to penetrate into the submucous tissue, where it causes ulcers, while it feeds on the tissue elements and blood corpuscles of the host. It is this form of dysentery which is so frequently met with in chronic cases returning from the East and which is associated with the serious complication of abscess of the liver, which differs according to various authors, from 11 to 33 per cent. in incidence. Judging by hospital experience in London, the amœbic form is some seven or eight times more frequently met with than is bacillary dysentery. It must not be forgotten that the symptoms to which liver abscess gives rise are sometimes the first which attract attention to the intestinal disease. The amœbæ die when exposed to cold or in stools which have stood for any length of time or which contain urine. It is therefore necessary, in order to establish a diagnosis, to collect a specimen of fæces in a warm bed-pan, free from urine, and, moreover, the microscope slide should be warmed. The amœbæ should be found living and motile, for then they can easily be recognised from other substances. It is better to search first in a piece of bloody mucus or slough which has probably come from the neighbourhood of an ulcer. If the fæces are not liquid a dose of Epsom salts can be given and the fluid portion of the stool examined or material may be obtained by passing a tube into the rectum.

The general treatment I have already given but I may emphasise the fact that rest is highly necessary and may require small doses of opium by the mouth or hypodermic injections of morphine. Bismuth is the most useful drug by the mouth as a continuance. I prefer the salicylate in wafers of 15 grains every four hours but doses of one drachm every four hours may be given. The method sometimes employed in England of giving doses of five grains or less is not to be recommended. If it is considered advisable to add an astringent to the bismuth tannigen answers well. Ipecacuanha is the drug treatment which I was taught as a student by Dr. Murchison. It is said to have been used in Peru for this disease for hundreds of years, and Helvetius, in 1653, cured the Dauphin of France with it, after which it was introduced into this country. On being adopted here it was found much more useful than the prevailing methods, which were bleeding, blisters, and mercury within and without. The usual method of administering it is to give a preliminary dose of sulphate of sodium and then to follow with 20 to 40 grains of ipecacuanha powder in a bolus. It is attempted to prevent vomiting by applying a mustard leaf to the epigastrium and giving to adults from 20 to 30 drops of laudanum half an hour before the ipecacuanha. Also it is insured that the patient shall take no fluid for at least two hours after the bolus. I found this treatment very unsatisfactory in Turkey and Egypt and it has been given up in many other parts of the world, such as South Africa, the Philippines, and some parts of India. But Sir Patrick Manson has re-introduced this drug with certain important improvements. In cases of chronic dysentery of the amœbic variety he orders the following treatment: the patient must be starved for four hours, a mustard plaster is applied to the epigastrium, and the patient is made to lie flat in bed without any pillows. 15 minims of laudanum in water are then administered and after a quarter of an hour 30 grains of ipecacuanha powder. To prevent vomiting the patient is kept rigidly at rest, the nurse is ordered to wipe his lips to avoid his making any movement, and no food is given for at least three hours after the dose. On the next night the same treatment is carried out, except that the ipecacuanha is reduced to 25 grains and the laudanum to 10 minims. On the third night the ipecacuanha consists only of 20 grains, preceded by 5 minims of laudanum. On the fourth night laudanum is discontinued and the ipecacuanha is further reduced to 15 grains. On the fifth night 10 grains and on the sixth night 5 grains of the drug are given. The treatment is then continued with a nightly dose of 5 grains for another week or ten days. In spite of the vomiting and the annoyance of having to lie absolutely still this treatment has proved to be most useful, and the amœbæ are found to disappear from the stools after the second or third dose. But as most white patients and many coloured men are thus caused to vomit I have persuaded Messrs. Evans, Sons, Lescher, and Webb to make for me some "membroids" which you see here. They consist of a capsule of animal membrane so prepared and sealed that the contents pass the pylorus without being discharged from their capsule and are therefore not absorbed until they reach the small intestine. The few experiments so far made with this "membroid" show that it either prevents or postpones vomiting in those people who cannot swallow large doses of ipecacuanha without rejecting it. If it be desired to treat patients with ipecacuanha I commend this prolonged method of giving it, provided that "membroids" are used. I should add that, in my opinion, ipecacuanha without emetin is not very useful for dysentery.

Calomel as an intestinal antiseptic is perhaps the oldest treatment of dysentery and has been given of late years by its partisans in doses even as high as 30 grains in the 24 hours, chiefly in the French and German colonies. I have never seen any good from its continued administration and I think I have seen deaths in elderly feeble patients caused directly by it. For more than 20 years I have preferred the treatment by sulphate of magnesium with or without sulphate of sodium. The earliest author to recommend this, so far as I know, was Professor Bartholow in 1877, then of Ohio and later of Jefferson College, Philadelphia. He says: "It is specially adapted to the acute stage when there are fever, pain, tenesmus, and stools of mucus and blood. It lessens the hyperæmia and causes fæcal evacuations, with the result of relieving the pain and the distressing straining." Sir Lauder Brunton, experimenting with various purgatives, had previously shown that the greatest secretion of fluid from the intestines was caused by sulphate of magnesium. Is it possible that the secretion of fluid also causes evacuation of amœbæ? The practical rule is to tell the nurse to give one-drachm doses of the saline every hour until a fæcal motion is produced. Experience in every individual case must show whether this treatment should be repeated every day or only twice a week. Major Buchanan, I.M.S., published in 1900 555 consecutive cases of this treatment in Bengal with only six deaths. Sulphur in doses of from 30 to 60 grains three times a day with Dover's powder has been found useful sometimes. Simaruba is much used in Egypt and other countries but I cannot praise it as the chief remedy.

As the earliest dysentery lesion occurs in or near the rectum the rational treatment would seem to be to destroy the amœbæ by rectal irrigations. The treatment of chronic cases by enemata is at least as old as the time of Celsus (lib. iv., cap. xv.), but when in 1898 I ventured to suggest that some cases might have the benefit of large enemata before they had become chronic I was hardly prepared for the opposition with which my paper was greeted in the Tropical Section of the British Medical Association meeting. In the discussion which followed only one speaker supported my views (Professor William Osler) but I am glad now to know that this treatment finds favour in many countries where dysentery is endemic. Strong in the Philippines prefers a solution of quinine, beginning with 1 in 1000 and after a few days increasing it to 1 in 500. Nitrate of silver 1 in 1000 is the most favourite rectal injection, and I either use that or sulphate of copper in the same strength. Whichever drug is employed the routine method is the same. A long tube and funnel or a reservoir containing three pints are indispensable. The rectal tube must be at least three feet in length and soft enough to avoid injuring the bowel; after being well greased with boric vaseline it should be introduced, if possible, its whole length. The fluid is not injected but allowed to run in slowly during some minutes. The buttocks must be raised on pillows and the foot of the bed elevated on blocks, or the patient should assume the knee-elbow position. If the anus be very sore from many acrid discharges it may be painted with cocaine before the operation, or a suppository of one grain of cocaine may be inserted half an hour before the irrigation. Until the patient becomes accustomed to the treatment the tube should be passed by the medical attendant himself. All patients can hold one pint, rapidly increased to two pints, and some can gradually accustom themselves to take four pints or more. The enema need not be retained more than five minutes and need never be given more than twice a day. As a rule an enema of this kind every morning is enough and in the evening I give a simple cleansing enema,

such as two pints of saline solution or water in which one ounce of linseed has been allowed to soak for some hours. This soothing enema may be retained by the patient as long as he likes. All enemas must be given warm. I have never seen any harm resulting from this method of treatment but it is obvious that suitable cases must be chosen. If the intestinal irritability and inflammation are thereby greatly increased it is well to wait until the case is less acute. Few people would dare to employ rectal irrigations if they suspected gangrene or impending perforation. In chronic patients with a history of many relapses it is difficult to know for how long they should be submitted to rectal treatment but so far my results have been uniformly good after three or four weeks. Weekly examination with a sigmoidoscope or a large rectal speculum will show you whether the ulcers in the rectum are improving in appearance or not. I should remind you that it is impossible to produce a vaccine for the amœbic form of dysentery because there is no evidence that any toxin is created. I know very little good of the surgical treatment of chronic dysentery which consists in colostomy or in washing out the bowel through the appendix.

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ABSTRACTS OF

The Fitz-Patrick Lectures

ON

CONTRIBUTIONS FROM HISTORY AND LITERATURE TO THE STUDY OF PRECOCITY IN CHILDREN.

Delivered before the Royal College of Physicians of London

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LECTURE I.

Delivered on Dec. 3rd.

"O 'tis a parlous boy,
Bold, quick, ingenious, forward, capable.
.....
"With what a sharp provided wit he reasons,
So cunning and so young is wonderful."
—*Richard III., Act. III., Sc. 1.*

PRECOCITY has for the majority an evil significance, and the chief object of these lectures is to discuss how far such views are borne out by facts. The term precocity, though used in somewhat different senses, implies in general an unduly rapid mental development in comparison with some standard assumed to be the normal. But such a standard is extremely difficult to fix. There is only a vague consensus of opinion as to what constitutes the average mental equipment of the individual and this is the sole test we can apply. Mental precocity is a variation in an upward direction from a rough and indeterminate average. At one end of the scale are genius and brilliant intellect, at the other dementia and imbecility. The opposite poles are linked together by innumerable gradations. Standards of eminence are no less difficult to fix than standards of mediocrity. They rise and fall in different ages, nations, and races. When standards are high pre-eminence is rarely undetected; when low it is often true that the world knows nothing of its greatest men, and mediocrity may pass for genius. Hence it is difficult to compile a list of eminent men with a view to determining their degree of precocity. The degree of their eminence is a matter of opinion.

By some precocity has been regarded as a condition of *pre-maturation* of mental faculties necessarily ending in early decay. This view, for reasons to be discussed later, is considered erroneous. Normal intellectual precocity is defined as an early manifestation of mental development approaching the highest adult type—namely, that of genius. Some distinguish between normal precocity and morbid or forced precocity, which is held to be a spurious imitation of unusual mental ability resulting from educational over-pressure and unsuitable environment. It is this form which has gained for early brilliance its ill repute. It is not, however, agreed that the intellectual powers in such cases are spurious—they are real; only in consequence of want of mental balance, equilibrium, and judgment, and absence of control over emotions, talent may be rendered fruitless.

VARIETIES OF INTELLECTUAL PRECOCITY.

Genius is but an unusually high manifestation of general or special ability. A conclusion more important to this inquiry is that every genius has shown precocity in one shape or other, although such precocity may have been thwarted, unrecognised, or misunderstood. Johnson defined genius as "a mind of large general powers accidentally determined on some particular direction." Genius, however, does not necessarily specialise. Its highest form is that of the *intellectus universalis*, which embraces every specialty except, perhaps, the musical and artistic faculties. But the greatest musicians and artists have also possessed the *intellectus universalis* to a large extent. On the other hand, special genius may exist with almost complete abeyance of other mental faculties as seen in the case of *idiots savants* and minor degrees of the same defects may be seen in many a genius whose line is essentially one-sided.

The order of appearance of mental precocity follows fairly closely that of normal development of faculties; it is shown (1) as regards sense impressions; (2) mental images; and (3) abstract ideas. Sully[1] concluded after investigating a large number of histories of musicians, poets, novelists, scholars, scientists, and philosophers that their precocity varied in accordance with the degree of abstract thought required in manifestation of their special faculties. Precocity was earliest shown with regard to *sense impressions* as displayed by musicians and artists; next in connexion with *mental images*, as seen in poets and writers of fiction; and latest in philosophers who deal with *abstract ideas*. Precocity may be evinced, however, in all the capacities mentioned, in or out of their normal development, or it may apply to one alone or to all together. The most striking form of precocity is shown in the general all-round ability and versatility of the *intellectus universalis*. Goethe's is perhaps the finest instance known. All who taught him when he was a boy claimed him as their own either as a predestined man of science, a born artist, an erudite theologian, an accomplished courtier, a diplomatist, or a juris-consult. He would have been regarded as a genius in any special branch, whether poetry, art, science, law, or philosophy, had he chosen to devote himself exclusively to it. Other examples of the *intellectus universalis* selected were those of Hugo Grotius, John Stuart Mill, and Dr. Thomas Young, who was at once scholar, linguist, scientist, and antiquarian. Amongst painters who showed the *intellectus universalis* was mentioned Leonardo da Vinci who was artist, sculptor, architect, mathematician, and engineer. Of musicians, Wagner was perhaps the best instance of the versatility of genius.

In accordance with Johnson's definition of genius, the *intellectus universalis* does as a rule specialise in a direction determined by individual taste and inclination, and it is of interest to consider from historical examples the time of life and mode in which a special bent declares itself. Biographies and autobiographies with few exceptions give but slender clues to early tendencies which shape a life's career. Were it otherwise, we might possess much interesting and valuable information, but we should also have to deal with a vast amount of irrelevant and elaborate fiction concerning the early history of great men. The Bible is singularly silent on the precocity of its heroes, except, perhaps, in the cases of Joseph, Samuel, and David. To many, the events of childhood seem unimportant compared with tales of adult prowess. Plutarch, however, was firmly imbued with the idea that "coming events cast their shadows before." In his anecdotes, for instance, concerning Demosthenes, Themistocles, Alcibiades, Cicero, and Quintus Fabius Maximus in

[1] Sully: Genius and Precocity, Nineteenth Century, June, 1886.

their boyhood, he describes their precocity in lines which afterwards distinguished or defamed them.

Innumerable instances might be given to show the early stage at which a bent towards a future life's work is manifested, and also the apparently insignificant nature of the event which prompted it. Haydn's genius was first fired by hearing Handel play. Chatterton's passion for mediæval manuscripts, and also for forging them, was excited by seeing an illuminated letter on the cover of a sheet of music. Cuvier's love for natural history was brought to light by seeing Buffon's coloured plates. Flaxman as an invalid child was led to copy casts of the antiques by reading of Ajax and Achilles. Tycho Brahé saw an eclipse of the sun at the age of 14 years and henceforth devoted himself to the study of astronomy. Robert Murphy, the mathematician, whilst lying in bed with a fractured femur in his eleventh year was inspired to take up his specialty by an old Cork almanac containing mathematical problems.

Ambrose Paré took to surgery after seeing an operation for lithotomy when an uneducated foot-boy. Astley Cooper when not yet 13 years of age discovered his bent for surgery by the kudos which he gained for improvising a tourniquet for a boy who had sustained a compound fracture of the femur. Fortunately he put the tourniquet on the right side of the wound or we might not know him as a surgeon.

AGE AT WHICH SPECIAL PRECOCITY IS MANIFESTED.

Musicians.—Out of 40 names of musicians collected by Sully 38 showed decided bent for music before 20 years of age. Palestrina and Tartini are the two exceptions, but accounts of their lives are legendary. 29 of the 38 showed musical gifts as young children, the others at about 12 years. Rossini positively disliked music until he was 17, probably because he was forced to practise by his musical parents. Wagner showed no particular leanings towards music until he heard Beethoven's symphonies at 15 years of age. As examples of precocious musicians may be mentioned Mozart, who played minuets at four years of age, and was exhibited as a Wunderkind a year later. Early in his fifth year he composed concertos; at 11 an *opera buffa*. Mendelssohn began music in his fourth year and certainly wrote compositions for the piano at 10 years. Schubert at 11 years played the violin in church and composed songs. Meyerbeer as a young child could play any air he heard. He performed in public at nine years of age. Hillier did the same at ten years. Spohr played the violin in public at 12 years and Rubenstein the piano at 10. Mehul was an organist at 10. Liszt played in public at 12 years. Schumann composed before he was seven years; Cherubini at nine years; Auber at 11 years; Weber at 12 years, and produced his first opera at 14 years. David composed at 13 years; Lotti and Rossini at 16 years; and Purcell at 17 years.

Painters and sculptors.—Precocity in painters and sculptors is almost more striking than in musicians. Sir Thomas Lawrence at the age of four years showed such skill in drawing and so remarkable a memory that callers at his father's house were asked: "Will you have him quote from the poets or take your portraits?" David Wilkie could draw before he could read and paint before he could spell. George Morland drew almost as soon as he left the cradle and Canova as soon as he could hold a pencil. Murillo and Tintoretto as small boys decorated the walls of their fathers' houses. Mantegna at 11 years of age was entered among the Guild of Painters. Raffael, Tiziano, Michael Angelo, Holbein, Ruysdael, Van Dyck, Rubens, and Correggio all began early and showed their talents at once. In Sully's list of painters, sculptors, and architects he found that 42 out of 58 showed decided skill before the age of 15, 16 between 15 and 20, 15 between 20 and 25, one between 25 and 30, and one after 30.

Poets and literary men rank high in the matter of early production. Tasso, of whose precocity wonderful stories are related, wrote his "Rinaldo" at his eighteenth year at latest. Metastasio improvised in the streets and held a crowd as a child. At 12 he translated the Iliad. Beaumont composed tragedies at 12. Abraham Cowley before he was ten wrote an epical romance, described as the "most astonishing feat of imaginative precocity on record." Ovid wrote verses and Ariosto dramas in boyhood. Pope wrote his ode to Solitude and other poems before he was 13. Chatterton published at the age of ten his first poem on "The Last Epiphany" and another poem "Elinoure and Juga," published later, was written at 12. (Other precocious writers mentioned were Scott, Lytton, the Brontës, Madame D'Arblay, Isaac Watts, Calderon de la Barca, Giovanni Argoli, Polevoy the Russian, Dickens, Shelley, Tennyson, George Sand, Goethe, and Macaulay.) Sully found in 28 novelists that three out of four showed evidence of imagination before they were 20. Of 52 poets 39 were distinctly precocious. Four out of seven were famous before they were 20. The youthful effusions of even the greatest have usually, and perhaps wisely, been suppressed, but most, if not all, great writers of fiction and poetry have practised early.

In scholars and historians the *intellectus universalis* is usually apparent and their special lines follow individual taste. Grotius, Porson, Niebuhr, and Thirlwall are conspicuous examples. Sully found that five-sixths of 36 cases were distinguished by preternatural ability either in childhood or in early youth in directions pointing to their future activities. The rest proved themselves quick all-round learners or specialised in some other direction—e.g., mathematics or poetry.

Mathematicians usually show talent at an early age. Aristotle said: "A boy can become a geometrician or arithmetician and can grasp these subjects philosophically ..... because the first principles of mathematics are self-evident." In many cases—for instance, in Porson and Gibbon, Jowett and Bidder—brilliancy in mathematics is part of the *intellectus universalis*. On the other hand, it is certain that many minds of great general acuteness are incapable of grasping mathematical principles or even of learning simple arithmetic and the multiplication table. Leigh Hunt said he never succeeded in mastering the latter and Mr. Andrew Lang has declared himself incapable of arithmetic. Frank D. Mitchell has collected 24 cases of mathematical prodigies. He concludes that precocity in calculation is not an abnormal condition, that mental arithemetic is independent of general education, and also of mathematical ability. The calculating prodigies owe their curious gift to various "mathematical and psychological short cuts." Many of the calculations hitherto supposed to belong to the visual memory type are mostly of the auditory or audito-motor type, at least in calculation. But two, and possibly four, of the major prodigies belong to the visual type. The symbol images or mental pictures which mathematicians have the power of calling up are probably analogous to the "tone images" of musicians.

Men of science.—The *intellectus universalis* is again noticeable in many men of science. Their special bent is often shown in mechanical or inventive precocity. Thus Galileo made miniature models and repaired toys. Ferguson made models of mills, spinning wheels, and between seven and eight discovered independently the principle of the wheel and pulley. Sir Isaac Newton constructed model windmills, water clocks, and sun-dials as a boy. Robert Simson, the mathematician, also made a sun-dial. Pascal invented his arithmetical machine at 19 and wrote a treatise on conic sections at 16. Christopher Wren in his thirteenth year produced a new astronomical instrument. Mechanical ingenuity is, of course, not always to be regarded as precocity in invention. Deftness and skilful coördination of delicate hand movements may be seen in imbeciles. Many boys have a "furore" for constructing ships and engines without any remarkable success in doing so. Any boy can take a watch to pieces, but one who can put it together again and make it go unaided is deserving of encouragement.

The precocity of *naturalists* is sometimes shown in the collecting mania. Darwin said: "The passion for collecting which leads a man to be a systematic naturalist, *a virtuoso*, or a miser was very strong in me." William Smith (Father of Geology), Hugh Miller, and Humphry Davy collected geological specimens when children. Edward Forbes the naturalist had a museum of natural curiosities by the time he was seven. Frank Buckland amassing collections of every kind of insect, bird, or animal when a schoolboy is perhaps the best instance of a naturalist's precocity. Charles Waterton collected birds' eggs before he was eight. Audubon took a lively interest in ornithology almost in infancy. Agassiz at 14 had 50 live birds in his room at one time. Humboldt from his love of collecting and labelling plants, shells, and insects was known as "the little apothecary." It cannot be pretended that the collecting mania is peculiar to children who are precocious in any line. Most schoolboys collect something or other. It may be a passing hobby or an indication of future distinction.

Philosophers and metaphysicians.—Although as a general

rule the growth of abstract thought is developed later, or at all events displayed later, than other faculties, there are some instances of precocity in their special line apart from general ability shown by philosophers and metaphysicians. Berkeley conceived his principle of idealism at 18 and published his new theory of vision at 24. Leibnitz, a prodigy of youthful learning, showed his philosophic bent in his criticism of the doctrine of "substantial forms" at 15. Schelling had written three philosophical works before he was 20. Hume displayed speculative ability "when very young." Sully found that out of 36 cases of philosophers and metaphysicians two wrote on philosophical subjects before they were 20, 18 when between 20 and 30, eight between 30 and 40, and eight after 40. Kant's first independent treatise appeared when he was aged 46. Amongst philosophers only recognised as such after 50 we find such names as Descartes, Hobbes, and Locke.

Leaders of men.—History is strangly silent as regards early precocity shown by statesmen, politicians, soldiers, and sailors, but now and again they showed glimpses of their future career, as already mentioned in the cases recorded by Plutarch. Thus we hear of Lord Clive, fierce and imperious as a boy; leader of a band of hooligans who levied tribute on the shopkeepers; climbing Market Drayton steeple; idle at school yet leading one of his masters to predict that he would make a great figure in the world. Wellington was too delicate to play at school but superintended the games of other boys, rigidly insisting on the observation of rules and fairness. William the Conqueror drilled his little army at the age of five. Nelson's remark as a child to his mother "What is fear? I never saw it," is suggestive. Canning never played at games like other boys, but at 12 "assumed at once the sober dignity of manhood." Sully's general conclusions from the study of 287 cases divided into seven classes are that four-fifths, or 231, displayed talent before the age of 20 years. The rest he regards as exceptions to the general rule that all men of genius give early manifestations of brilliancy. Jastrow[2] agrees with Sully that there is a general relationship between intellectual eminence and precocity. He thinks, however, that Sully is too lenient in his criticism of pre-eminence. He selects 90 names of world-wide fame from Sully's list of 287 and distinguishes in these 90 cases "special" from "ordinary" precocity. He defines special precocity as "an unusually early and very pronounced evidence of special gifts, including at the upper end of the scale the Wunderkinder of the world and at the lower a somewhat less degree of the same manifestation, but including none that could not of themselves attract great attention." Wunderkinder appear in a proportion of about 1 in 14 or 15 of Sully's 287. Jastrow concludes that 1 in 5 of Sully's 287 was "specially precocious," whereas Sully places 4 in 5 in the same rank.

Precocious memory.—In some cases precocity is due simply to an extraordinary memory and imitative power, shown especially in the facility of acquiring languages. Most great men have had prodigious memories, and striking examples are those of Gibbon, Goethe, Napoleon, Johnson, Macaulay, Fichte, Cuvier, Arnold of Rugby, and William Wotton. But good memories alone do not make great men. Brilliancy in school examinations dependent on a retentive memory for facts is not always followed by success in after life.

The *idiots savants* sometimes possess an extraordinary memory for figures, dates, and past events. One of Dr. R. L. Langdon-Down's patients could recite all the answers in Magnall's Questions without an error and repeat from memory anything he heard simply by a process of verbal adhesion. Another knew the tune, words, and number of nearly every one of the "Hymns Ancient and Modern." Blind Black Tom of Massachusetts is the most famous recorded example of the idiot savant. He was an imbecile negro born in 1850. At the age of 12 years he toured the States as a musical prodigy. He had a large repertoire of classical and operatic music which he played with marvellous facility entirely by ear, and he could reproduce any piece of music after once hearing it. His memory in other respects was phenomenal. He could repeat a discourse of 15 minutes in length without loss of a single syllable, yet without understanding a word of it. The idiots savants are extreme examples of precocious exaltation of one faculty with the exclusion of all others. Minor instances in which brilliancy in one direction is tarnished by dulness in others are not uncommon. Their recognition is of practical importance. Attempts to promote their versatility by stereotyped systems of education may result in depriving them of the one talent which they possess.

[2] Jastrow: Journal of Education, July, 1888.

LECTURE II.

Delivered on Dec. 5th.

A general impression that precocity is a pathological condition tending to cause early death is illustrated by popular expressions in most countries, such as "Il ne vivra pas, il a trop d'esprit," "Kluge Kinder sterben früh," "Immodicis brevis est ætas, et rara senectus," "Whom the gods love die young," "Early ripe, early rotten," &c. Most alienists share these opinions. Crichton-Browne says: "We look upon it (precocity) as a morbid psychical condition generally terminating in the worst results." Clouston regards child musicians and child poets as "more or less pathological." Savage speaks of special capacity and genius, whether it be on the mental or even muscular side, as "associated with danger." Lombroso calls precocity "morbid and atavistic." Baur and Ludwig Cernej agree. Christian and Morels find that a considerable number of their cases of dementia præcox showed unusual promise of mental ability. Cases in favour of the view that precocious children die young could be multiplied. Historical examples are those of Heinecken, the learned child of Lübeck, who died at four; Montcalm, who knew the alphabet before he could speak, and died at 15; Baratier, who mastered Latin, French, Dutch, Greek, and Hebrew at eight, and died at 19; and De Beauchâteau, who died at 13 after making a name as a poet at 10, and astounding Mazarin and the court of Louis XIV. by his talents and mental powers. Yet instances to the contrary abound and the evidence is strongly in favour of the view that all the greatest men in the world have been precocious and their lives have not been below the average in consequence of precocity. Jastrow averaged the lives of specially precocious great men, arranged in three classes, as (1) artists and musicians, (2) poets and writers, and (3) scientists and philosophers, as 60·1, 61·1, and 66·3 years respectively. He concluded that the average age at death of Wunderkinder was 56·9 years—probably an underestimate, as his number of selected cases was small (20 in all).

In favour of the popular view that active minds inhabit frail bodies many instances may be cited, including the cases of Newton, Goethe, Voltaire, and a host of others; yet, as Galton maintains, "the belief that men of genius are as a race unhealthy, puny beings, all brains and no muscle, weak-sighted, and generally of poor constitution is erroneous." Many clever children have been delicate and in consequence have been led to cultivate their minds. When they have died from pulmonary tuberculosis, meningitis, or from any disease to which all children are liable, it is natural, though not reasonable, to blame their precocity. The opinion of alienists that precocity is an indication of future insanity is supported by such cases as those of Tasso, Carpio da Vega, Cowper, Jerome Cardan, and others. If drug-taking and alcoholism are included as evidence of insanity the cases of Poe, Burns, the Coleridges, father and son, De Quincey, Morland, and Rembrandt are in point. If waywardness, eccentricity, and unconventionalism are signs of madness a large number of geniuses have been insane. But melancholy, delusions, narcomania, and eccentricity are by no means confined to men of genius or to men of high ability who have been precocious. Because all insane geniuses have been precocious it does not follow that all who are precocious are in danger of becoming insane. The alienist's experience is confined to those who do become so. There is no evidence that precocity portends or produces insanity.

Another prevalent impression with regard to precocity is that it implies prematurity. Havelock Ellis defines precocity as "an earlier than average attainment of the ultimate growth of maturity." The precocious child has been compared with the early riser, "conceited all the forenoon of life, stupid and uninteresting all the afternoon and evening." It is commonly predicted of him that he will "go up like a rocket and come down like its stick." The cases of Wunderkinder who died young may be cited in favour of the view that precocity ends in progressive or premature senile decay. But Jastrow's careful scrutiny of his specially precocious class—90 in all—shows that they do not reach the

zenith of their powers earlier but even somewhat later than other eminent men, although they arrive more speedily at the period of original production than others. He gives his results in the following table:—

Jastrow's Table (Specially Precocious Great Men).

Age at production—	Artists and musicians (precocity of sense faculty).	Poets and writers (imaginative).	Philosophers and scientists (abstract thought).
(1) Of first work ...	13·8 years.	15·6 years.	17·6 years.
(2) First great work	28·0 ,,	27·8 ,,	32·1 ,,
(3) Greatest work ...	46·7 ,,	43·9 ,,	47·7 ,,

For Wunderkinder.

(1) First work	14·3 years.
(2) First great work	25·6 ,,
(3) Greatest work...	42·1 ,,

Thus the average age at which the greatest work is produced by prodigies is about 42, whereas 47 is the age of ripest development in specially precocious eminent men. Lancaster finds that in 100 successful novelists the wave of success reached its highest point between 30 and 35 years of age. In 53 poets the first work showing talent was published between 15 and 20, the average being 18, in striking contrast to the average age of first patents by inventors, which is 33 years. Amongst musicians the average age at which marked talent was first shown is a little less than ten years 95 per cent. showed rare talent before 16. Of 53 artists 90 per cent. showed talent before 20, the average age being 17·2 years. In 118 scientists he calculates that their life interest first began to glow a little before they were 19 He concludes that "those whose success is based on emotional traits antedate by some years those whose renown is more purely in intellectual spheres, and taking all together the curves of the first class culminate between 18 and 20." Dexter's analysis of between 8000 and 9000 twentieth century successes in all branches shows the average age at which they won renown to be 46 9 years. This bears out the statistics of Jastrow and others, and assuming, as seems to be the case, that all eminence is preceded by precocity it may be concluded that precocity does not imply prematurity and early decline of intellectual power. Were it otherwise a Goethe could not long survive his infancy. All precocious children should die demented at an early age.

The conclusions now offered are that precocity in itself is not a pathological condition tending to early decease or to premature mental decay; that all eminent men have been precocious as children, although in some cases their precocity may have been unrecognised. It is admitted that a certain proportion of precocious children have died young, but it is maintained that precocity was not responsible for their decease. Similarly, it must be admitted that many precocious children do not fulfil the promise of their youthful days, and that there is some foundation for the popular belief that clever children make dull men. We have therefore to consider the causes of such failure. The question what proportion of precocious children meet with success in after life admits no complete answer. A genius is known to the world by what he does and not by what he is.

Some assistance in dealing with the question is afforded by consideration of some of the qualities of genius itself, the condition under which it flourishes, its difficulties and manner of meeting them. The versatility of the *intellectus universalis*, for example, allows distinction in any chosen field, but versatility may be imitated by volatility, which causes the subject to flit from field to field without achieving success in any. The special bent of genius may be mistaken at first or unrecognised or thwarted. Genius escapes from a mistaken groove and asserts itself against restraint or want of recognition. But without self-assertion the merely brilliant intellect resigns itself to fate or wears itself out in futile fretting against environment. (Various instances illustrating the self-assertion of genius and its triumph in the face of mistaken, thwarted, and unrecognised bent were given.)

The emotional side of genius has an important bearing on the failure of those who share the overwhelming excitability and perhaps the intellect of genius without its saving qualities—namely, self-reliance, determination to succeed, and creative instinct. Egoism, self-consciousness, introspection, pride, and vanity are all characteristics of certain types of genius, but without steadfastness of purpose are bound to lead to failure.

Many eminent men have been considered dull in boyhood on account of an unrecognised *precocity of reticence*. This may be due to early development of the critical faculty, as, for instance, in the cases of Heine and Hegel. The precocity of reticence is often associated, especially in imaginative, philosophic, and scientific persons, with dreamy mental states, inability to descend to "trivial rounds and common tasks," and unsociableness. It may be mistaken for sloth and indolence, as happened to Balzac, or it may be recognised as a sign of unusual promise, as in the case of Descartes, and treated as such. When reverie and inattention are interspersed with flashes of ability they may exasperate a teacher. Some quietly and imperturbably follow their bent and assert themselves in spite of injudicious treatment Tamer spirits give in, or may be spurred on to make superhuman efforts to excel in lines which do not suit them, and fail.

The so-called artistic temperament occurring without the assiduity and determination to succeed which make the genius is a frequent cause of failure. Some eminent musicians, poets, artists, and literary men have been notoriously unstable in character, unbalanced in mind, and swayed by every emotion and idea which they portray. They have been alternately elated and depressed, childishly vain and exacting, selfish, faithless, unbridled in their appetites and desires, moral and physical cowards. Take from them their enthusiasm, zeal, and impulse to produce work and their genius will be fruitless. The characteristics mentioned, together with morbid introspection, hypersensitiveness to criticism, "phobia," moral, religious, and hypochondriacal, reveal the psychasthenic side of genius.

Psychasthenic precocity is shown in very early days and may indicate a budding genius or an intellectual ne'er-do-well. The future is largely determined by treatment. The psychasthenic-precocious child is usually a small, pert, and witty being, full of whims and fancies, fears and dreads, querulous, exacting, and peevish, depressed and lethargic, restless and excited by turns. His remarks are brilliant, shrewd, and old-fashioned. He is unsociable and shuns games. He is commonly pampered and spoilt on account of his delicacy, which is supposed to be due to threatened consumption or heart disease. He is a victim to frequent night terrors, habit spasms, and various antics and meaningless gestures. Attacks of headache and vomiting, enterospasm (usually regarded as appendicitis), palpitation, sweats, flushing and pallor, spasmodic asthma, nervous dyspepsia, irregularity of the bowels, and urticarial eruptions are common. Intellectual precocity in such cases is often described as a spurious imitation but, as a matter of fact, the intellect is above the average. The psychasthenic child is, however, extremely liable to break down mentally and physically, in consequence of educational over-pressure and emotional distress. Galton says: "A youth of ability and genius is almost independent of ordinary school education. He is omnivorous of intellectual work. The best care a teacher can take of him is to leave him alone, just directing a little here and there and checking desultory tendencies." The psychasthenic, however, needs much more individual attention. Generally speaking he cannot adapt himself to ordinary school surroundings. His education should follow in the lines for which he shows most aptitude. Overtaxing the memory with arbitrary facts and enforced labour on uncongenial tasks may lead to exhaustion. Exaggerated and one-sided teachings on religious, moral, and social questions should be avoided. Opinions on such subjects are sure to be lacking in breadth of view and are apt to become morbid obsessions in neurotic children. The moral fibre may be strengthened by sympathy, consideration, and encouragement. A word of praise often does more good than torrents of abuse. A simple natural life spent as much as possible in the open air is best. But although freedom from artificial emotional stress is a requisite, it should not be forgotten that boredom and *ennui* are as productive of neurasthenia and morbid mental states as a life of constant restlessness and excitement. No routine system of education is adapted to the needs of all alike. Any system which does not allow for individuality of mind, taste, and character may be harmful.

In conclusion, if brightness and ability were no longer regarded as morbid or unfavourable signs unless associated with nervous instability and hyperæsthesia, and if teachers would refrain from pressing on bright and clever but

neurotic children who show signs of impending mental exhaustion which are early recognised, the term precocity would lose much of its evil significance. The precocious child is not necessarily a genius but by careful management he may at least be prevented from becoming a failure in mind and body.

ON SOME CASES OF MYOMA OF THE UTERUS PRESENTING UNUSUAL FEATURES AND CALLING FOR URGENT SURGICAL INTERFERENCE.[1]

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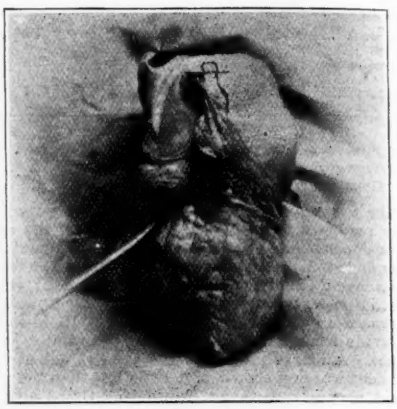
THE complications and troubles arising in connexion with uterine myoma fall naturally under three headings—viz.: (1) those due to hæmorrhage; (2) those due to secondary changes occurring in the tumour; and (3) those which may be classed as mechanical, resulting from the accidents of size and the position of the growth. This latter class may again be subdivided according as the troubles arise: (*a*) in the unimpregnated state; or (*b*) in connexion with pregnancy or labour. Hæmorrhage is a symptom or complication of such frequent occurrence and, together with its surgical treatment, is so familiar to everyone that I do not intend to take up your time by quoting examples of this class. The series of cases which I bring before you and upon which I base these few remarks are instances of class 2 and both divisions of class 3 and present so many features of unusual interest that I make no apology for putting them together in the form of a short paper.

CASE 1. *Suppuration in a cervical fibroid producing septicæmia; panhysterectomy.*—This patient, an unmarried woman, aged 33 years, was admitted into hospital suffering from well-marked septicæmia. She gave a history of removal of a large tumour per vaginam three years previously which had caused bleeding for four years. After this she was well for 12 months. Then hæmorrhage recurred and was shortly followed by a very foul and continuous vaginal discharge. She had been ill, losing flesh and strength, and getting steadily worse for 12 months, and had latterly noticed an abdominal tumour. She was ill and anæmic and had an irregular temperature with a foul vaginal discharge. The abdomen and pelvis were occupied by a tender moveable ovoid tumour, the upper pole of which was felt two inches below the umbilicus, while the lower pole presented in the vagina. Centrally situated in the latter was a depression with indurated edges, which admitted the finger tip, and into which the sound passed four inches. The vaginal roof could not be reached by the finger at any point. The provisional diagnosis pending further examination was uterine myoma, in which the whole organ, especially its lower segment, was distended and the cervix probably the seat of malignant disease. As a preliminary to further examination and treatment the supposed uterine cavity was washed out with 1 in 2000 perchloride of mercury lotion. On each occasion this was followed by intense pain, increase in temperature and rigor, and after two or three trials was abandoned. A further examination under ether and in the lithotomy position was made, when the posterior and lateral fornices were found to be from half an inch to one inch above the reach of the finger, while in front the sound could be passed nine or ten inches, its point being felt just below and in front of the fundus of the tumour. The true state of affairs thus revealed, the patient was placed in the Trendelenburg position and the abdomen opened and panhysterectomy performed, the greatest care being taken on opening into the vagina not to foul the peritoneum with the stinking pus which was escaping from the sinus in the lower pole of the tumour. The pelvis was douched with sterile saline solution which was run out through the vagina, the pelvic floor was closed in the usual way, and a glass drain was left in the abdomen for 24 hours. On the next day the patient expressed herself as feeling better than she had done for many months. She made a rapid and straightforward recovery, the temperature never rising above 99° F. after the operation.

[1] An abstract of a paper read before the Swansea Medical Society.

According to Bland-Sutton's diagrams[2] cervical fibroids in splitting, distending, and lengthening either cervical wall cause corresponding lengthening of the opposite wall so that both lips of the os remain on the same level. In this case the uterus appears to have made some kind of an attempt to get rid of the tumour, which would account for the patulous os and position of its anterior lip. Presumably the tumour

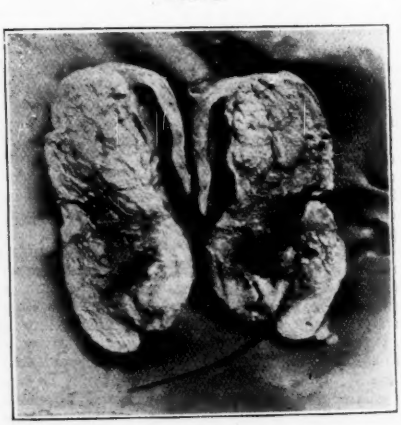
FIG. 1.



Specimen as removed. The catheter is lying in the uterine cavity. The lower half is the intravaginal portion of the tumour, the upper half the intraperitoneal. (Half the specimen is in the Museum of the Royal College of Surgeons of England.)

which had been previously removed was the enormously enlarged myomatous posterior lip which had subsequently continued to grow. The completeness of the surgical trap in this case will be appreciated by comparing the diagram (Fig. 3), which represents the tumour *in situ*, with the specimen (Figs. 1 and 2). The anterior lip was situated high up behind the pubes quite out of reach, while the centrally situated depression in the vaginal pole of the tumour led to a central cavity which was found to contain two ounces of pus and slough. The suppuration was

FIG. 2.



Specimen after splitting. The whalebone bougie lies in the suppurating cavity and the centrally situated sinus leading to it.

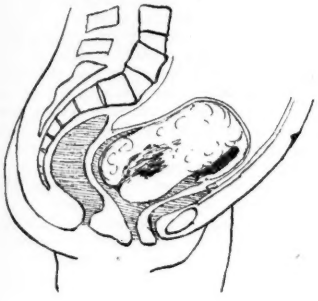
probably the result in the first place of necrotic changes in the myoma, the devitalised tissue subsequently becoming infected from the vagina. Fibroids of the cervix and posterior uterine wall are especially liable to give rise to pressure symptoms inasmuch as they tend to remain within the pelvis instead of rising into the abdomen as they

[2] THE LANCET, April 2nd, 1904, p. 931.

increase in size. In the case just narrated the tumour had not reached sufficient size to give rise to trouble of this nature; moreover, it maintained the axis of the normal uterus; but the following case is an unusually well-marked example of a myoma causing serious pressure upon the pelvic viscera.

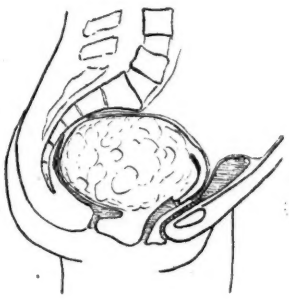
CASE 2. *Intestinal and urethral obstruction caused by impaction of a cervical myoma in the pelvis.*—The patient was an unmarried woman, aged 36 years, living a very active and athletic life. One evening after cycling several miles in the pouring rain she was suddenly seized with acute abdominal pain and rectal and vesical tenesmus. Examined on the same evening by Dr. —— of ——, with whom I subsequently saw her, the pelvis was found to be completely filled by a hard immoveable mass which occluded the lumen of the rectum and had carried the bladder upwards, the cervix being felt high up jammed against the symphysis. The bladder was distended and catheterisation was difficult owing to compression of the urethra. All acute symptoms were

FIG. 3.



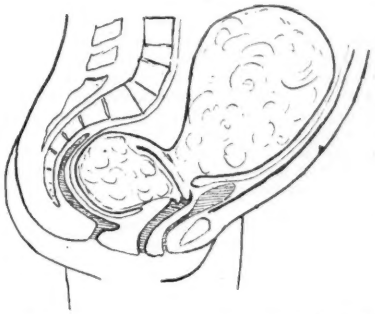
Necrotic and suppurating cervical fibroid (see Case 1).

FIG. 4.



Cervical fibroid impacted under promontory and causing rectal and urethral obstruction (see Case 2).

FIG 5.



Subperitoneal myoma causing retroversion and incarceration of myomatous uterus below sacral promontory (see Case 3).

speedily relieved by sedatives, and when I saw her three days later her only complaint was discomfort due to urethral obstruction. The abdomen was full but not distended, flatus having been passed that day. The rectum was still tightly compressed against the sacrum and the bladder as it filled in the intervals of catheterisation was felt as a tumour above the pubes. There had been no previous trouble in connexion with urination or defæcation and no menorrhagia. The sudden and severe onset of the symptoms led to the belief that a solid ovarian tumour or subperitoneal myoma had been forced into Douglas's pouch and become impacted. The abdomen was opened on the following day when it was found that the mass was a myoma of the posterior wall of the uterus and cervix which had burrowed under the peritoneum, obliterating Douglas's pouch and opening up the layers of the broad ligament. Fig. 4 shows the condition fairly accurately. To attempt enucleation without being prepared to proceed to hysterectomy was out of the question, and for this the only available relative refused to give consent. It was decided therefore to endeavour to dislodge the tumour from under the sacrum sufficiently to relieve pressure on the rectum and urethra and if possible to retain it in its new position. By dint of considerable force exerted from below through the rectum, combined with traction by means of the fingers hooked over the posterior wall on either side of the promontory, the tumour was at length and with the greatest difficulty elevated sufficiently to give an inch clearance between it and the sacrum. A lozenge-shaped piece of peritoneum was then removed from a point just behind the position of the fundus uteri and the tumour at this point was fixed to the abdominal incision. A few hours after the operation a copious motion was passed and urine voided spontaneously. The patient made a complete and afebrile recovery and two months later was leading her usual life except that she was advised to give up violent exercise.

Retention of urine from pressure by cervical or broad ligament fibroids is by no means uncommon, but compression of the rectum to the extent of producing obstruction is a far rarer occurrence. The sudden onset of the symptoms must have been due to rapid increase in size of the tumour resulting from vascular engorgement since the relations of the peritoneum and rectum showed that it had always occupied the pelvis.

As regards the treatment, the operation at the time seemed likely to be most unsatisfactory; nevertheless, it was hoped that, released from under the promontory, the fibroid would soon increase in size sufficiently to render its subsidence again into the pelvis impossible. The sequel proves this to have been the case, and for this and other reasons is of sufficient interest to record. In November, 1903, upon the advice of Dr. ——, she consulted me again, as she intended to get married and proposed to live in one of the colonies, probably at a distance from medical aid. She enjoyed perfect health and although the tumour could be felt just where it had been fixed and was rather larger she was practically unaware of its presence. She absolutely refused hysterectomy, but was anxious, if possible, to have the tumour removed, but especially to place herself as far as possible beyond the reach of trouble arising from her condition. In the circumstances I advised sterilisation, and after the matter had been fully explained to everyone concerned this course was decided upon. In December, 1903, with the help of Dr. A. W. C. Cameron and Dr. E. Le C. Lancaster the abdomen was reopened at Swansea. The ventral adhesions were firm but apparently no longer needed to keep the tumour and uterus well to the front. The former, however, proved to have increased considerably in size and altered in shape, the direction of its increase being towards the umbilicus, while the peritoneum was lifted still further off the rectum and also off the bladder. A thorough search failed to discover either ovary, although at the previous operation both tubes and ovaries were well in view. Projecting from the right front of the tumour was a cystic swelling about two inches in diameter. This was enucleated and appeared to be a cystic ovary. The patient married shortly afterwards and recently (four years after the first operation) I heard from her in her colonial home in South Africa. She tells me that she has never suffered since the first operation from constipation or any trouble on micturition and that she menstruates regularly, also that she does all the work of the house and a great deal on the farm and has never felt or looked so well.

Training a fibroid in the way it should grow so as to do the least possible harm instead of performing hysterectomy is at the moment most unorthodox treatment. Possibly, however, at no distant date when with the swing of the pendulum conservatism in uterine surgery, which is at present young and crude, becomes the rule instead of the exception, some such method of procedure in cases such as this may be the outcome of design instead of fortuitous circumstance. My only regret in connexion with the case is that I did not sterilise the patient by ligature or division of tubes at the first operation.

In the next case the prime reason for surgical intervention was complete disablement caused by the size and weight of the tumour. It is not, however, for this reason only that it is included in this series, but because it illustrates another and I believe a very unusual way in which a myomatous uterus may become imprisoned in the pelvis.

CASE 3. *Large subperitoneal myoma growing from the anterior uterine wall and leading to retroversion and incarceration of a myomatous uterus below the sacral promontory; hysterectomy.*—The patient, who was unmarried and 42 years of age, was under my care in the Swansea Hospital. She gave a six years' history of abdominal enlargement, with menorrhagia, not excessive, for 12 months For five years she stated that she had been disabled from her work (dressmaking) owing to the weight of the tumour and for the last 12 months life had become intolerable. The abdomen contained a hard smooth tumour which extended upwards four inches above the umbilicus, while the pelvis was filled with an equally hard globular mass. The os uteri was patulous and was displaced forwards and upwards behind the symphysis. The specimen, which weighs 16½ pounds, has, as you see, been quite spoilt for museum purposes by want of care in preserving, but reference to the diagram (Fig. 5) will explain its disposition and relations. At the operation, which was conducted in the Trendelenburg position, the abdominal tumour was easily eventrated through a long incision, the upper half of which was immediately closed to prevent prolapse of bowel. The dislodgement of the myomatous uterus from the pelvis was only affected by the exercise of considerable traction applied by means of the fingers hooked over its posterior wall and was accompanied by a loud report. Both ovaries were cystic and together with the myomatous uterus and subperitoneal myoma were removed *en masse*. The patient made a straightforward recovery and left the hospital in three weeks. Within two months she was earning her living. She states now, four years later, that she has no discomfort at the times when the menses would have occurred but on being pressed admits that for 12 or 18 months after the operation she experienced slight flushing.

The difficulty in elevating the myomatous uterus from the pelvis was trifling in this case as compared with the last and was not as in that due to impaction or peritoneal attachments, as its posterior surface was completely invested with peritoneum, but solely to the fact that a vacuum was created under and around the tumour on each attempt to lift it from its bed. The so-called vacuum report associated with the dislodgement of large solid tumours from the pelvis is, of course, due to the sudden inrush of air. The most interesting point, however, in the case is the mechanism by which the retroversion and incarceration of the enlarged uterus was apparently brought about. The tendency of any ordinary fibroid tumour when it reaches a certain size is like a pregnant uterus to rise out of the pelvis. So great may be the resulting traction that when the fibroid mainly occupies the upper half of the uterus the lower segment and cervix may get so pulled upon as to become quite attenuated, so much so that in these circumstances I have seen the narrowed uterus safely ligatured, the surgeon being under the impression that it was the pedicle of a solid ovarian tumour. Reference to the diagram (Fig. 5) will show how the large subperitoneal fibroid, attached as it is to the lower part of the uterus in front, raised the cervix and allowed the heavy fundus to become retroverted beneath the promontory, a position which further traction would tend to accentuate. Had the pelvic tumour grown much larger it could hardly have failed to produce serious pressure symptoms.

The manner in which a myoma may mechanically interfere with pregnancy or labour varies with the level of the uterine zone in which it arises and also with the variety of the growth—i.e., whether it is subserous, interstitial, or submucous. In the lower segment interstitial and submucous myomata are an obstacle to conception by their size, may lead to abortion, and may constitute a complete bar to delivery, as in the last of these cases. In the upper segment it is the subperitoneal myoma which is most likely to give rise to trouble either by leading to torsion or incarceration of the uterus or by becoming incarcerated itself or twisted on its pedicle. More rarely, as in the following instance, its size, shape, and position may combine to produce a set of symptoms as anomalous as puzzling.

CASE 4. *Small subperitoneal myoma giving rise during pregnancy to symptoms simulating strangulated hernia; abdominal myomectomy.*—The patient, aged 44 years, between four and five months advanced in her first pregnancy, was suddenly seized in the night with acute abdominal pain, vomiting, and strangury. She was seen on the next day by Dr. Arnallt Jones of Port Talbot, with whom I saw her a few hours later. She was then lying doubled up on her left side, complaining of great pain in the left flank and inguinal region and persistent vomiting. Micturition was frequent and attended by intensely painful expulsive effort. The abdomen was rigid and a hard lump was found in the region of the left inguinal canal. This was looked upon as a strangulated hernia containing a pouch of bladder, and operation was advised and accepted. As the abdominal wall relaxed under chloroform it became obvious that the tumour, which now shifted its position to a point above the level of the inguinal canal, was behind and not in the abdominal wall. Upon the abdomen being opened, which was done by splitting the various muscular layers in the direction of their fibres, it turned out to be a sessile subserous myoma of the pregnant uterus, measuring 2½ inches in its longest diameter, which was parallel to that of the inguinal canal. Between it and the pubic bone lay a fold of the bladder. The tumour was removed after transfixion and ligature, the resulting raw uterine surface being covered in by flaps of peritoneum which had been previously raised from off its sides. The result of the operation was immediate relief of all symptoms. Dr. Jones informs me that the patient went to term without further mishap and was delivered of a daughter.

The pathology of the case would appear to be as follows. The tumour happened to be so situated that with the increase in size and ascent of the uterus it eventually lay opposite the left inguinal canal, the left edge of the bladder, also carried up by the pregnant uterus, lying between it and the body of the pubic bone. Any sudden movement resulting in temporary increase of intra-abdominal pressure would now lead to more or less severe pinching of the bladder fold between the tumour and the pubic bone and would tend to set up the train of symptoms just described. Once established they would constitute a kind of vicious circle, the vomiting and abdominal rigidity increasing the intra-abdominal pressure and the force with which the bladder was pinched, and this again leading to increased vomiting. Left to itself the case would no doubt shortly have ended in abortion and probably also have resulted in subsequent repeated abortions.[3]

The last of this series of cases is an example of the most serious complication to which a uterine myoma, especially if interstitial, can give rise, and one which if not recognised early and relieved is bound to end in the death of the patient.

CASE 5. *Large interstitial myoma obstructing delivery and enucleated during labour.*—The patient, aged 29 years, had been married eight years. There had been two previous conceptions, two and seven years after marriage respectively, which had both ended in abortion at about the eighth week. In the present pregnancy labour commenced at term on March 2nd, 1906 For some 18 hours the pains were inefficient and Mr. E. R. Morgan and Dr. C Kemp of Morriston, who were in attendance, then discovered that delivery was completely obstructed by a fibroid of the uterus which had at first been mistaken for the fœtal head just about to engage the brim and which even under an anæsthetic they were utterly unable to dislodge. I was called in at 1 A.M. on March 3rd with a view to performing Cæsarean section. Upon introducing the hand through the dilated os with the palm towards the left the tumour was ascertained to be an interstitial myoma, firmly fixed in the left side of the uterus immediately above the cervix and extending three parts of the way across the pelvic brim, its edges fading off into the surrounding uterine wall. Above the tumour the child's breech could be felt. Arrangements were made for Cæsarean section by daylight, but at the same time it was decided first to attempt enucleation through the dilated cervix. Morphine was given and nine hours later chloroform was again administered. Guided by the left hand in the uterus a short-bladed long-handled knife with a blunt point was introduced and a four-inch vertical incision made into the uterine wall over the tumour. The uterine surface was easily stripped bare but the deeper parts of the growth, which appeared to extend between the layers of the broad ligament, separated less readily and necessitated working alternately with either hand. When free the difficulty was to remove it but it was eventually seized with a powerful volsellum and delivered by the help of this and one blade of the midwifery forceps. A leg was immediately brought down and the child, unfortunately dead, delivered as rapidly as possible,

[3] Since writing the above I have heard from Dr. Jones that the patient subsequently again became pregnant and was delivered at term of another child.

the intention being first to check hæmorrhage by pressure of the child's pelvis, trunk, and head against the gaping uterine wound, and secondly, to effect delivery, if possible, before the uterus had time to contract upon its contents, thereby diminishing the risks of rupture. So far as the uterine wound was concerned recovery was straightforward, the following complications being only indirectly connected with the operation. The temperature once reached 101·2° F. during the first four days after delivery, on the fifth, sixth, and seventh days the highest points registered being 100·2°, 99·4°, and 99·2° respectively, while on the eighth and ninth it was normal. On the tenth the nurse reported a rigor with a temperature of 103·6° and again on the twelfth a shivering fit, when the temperature was 101·2°, the patient complaining on each occasion of intense pain in the rectum, with the passage of blood and mucus. She attributed the attacks to the vaginal douche to which she very much objected. I saw her after each attack with either Mr. Morgan or Dr. Kemp, but nothing could be found to account for the symptoms. There was considerable rectal but no uterine or abdominal tenderness, while the lochia which had been normal throughout continued so. Two days later the temperature was again normal and further recovery uninterrupted. Upon inquiry it turned out that during the last three years she had suffered from time to time from similar attacks of rectal pain, not so severe as now and unaccompanied by the passage of mucus and blood. Recto-spasm, probably of nervous origin, would seem to have been the explanation of the symptoms.

For interstitial fibromyoma obstructing delivery the choice of treatment lies between enucleation and Cæsarean section with or without hysterectomy. The application of the former is limited by the size of the tumour, but where this allows of delivery the operation is far less formidable than Cæsarean section, even when not followed by hysterectomy. Nevertheless, perusal of several modern obstetric works seems to show that Cæsarean section, followed by hysterectomy, is the course generally recommended. By Cæsarean section the child's chances are of course increased, and when the mother is near the menopause and anxious for a living child it is no doubt justifiable. A further argument in its favour is that the offending fibroid is probably not the only one, or if it is its removal will very likely be followed by the development of others. But even if either of these possibilities should be realised it by no means follows that these further growths will be situated in the lower zone of the uterus, and elsewhere their presence is not necessarily harmful. In this case the patient had many years of child-bearing life before her, and, as was shown by a thorough bimanual examination of the flaccid and empty uterus at the time of operation, the growth was single.

A practical difficulty in deciding as to whether to attempt enucleation was the impossibility of accurately estimating the size of the tumour. The distance it projected into the uterine cavity was easily recognised, but its circumference on all sides faded off into surrounding tense uterine wall and it was impossible to say how far it extended. It was recognised, however, that should the tumour after enucleation be too large to extract it might still be removed with the child by Cæsarean section after packing the uterine wound with gauze. The risks of enucleation would seem to be threefold—sepsis, hæmorrhage, and rupture of the uterus. The first is, or should be, entirely avoidable. During the actual process of enucleation smart hæmorrhage was expected, but there was surprisingly little. On the other hand, after its completion, when the uterus is emptied and contracts, all danger of hæmorrhage is over. Indeed, the period of labour must be the most favourable of all times for the extirpation of a fibroid by enucleation. Rupture of the uterus through the enormous wound of its internal surface is probably the greatest risk to be faced, but by adopting the precaution of emptying it rapidly so as not to allow of its contraction upon any solid contents this danger can be reduced to a minimum. The specimen weighs 6½ pounds, and is uniformly covered by a thin layer of uterine muscle fibre. It measures in its longest and shortest diameters 4¾ and 3½ inches respectively. Its centre shows commencing red degeneration which, according to Bland-Sutton frequently occurs in fibroids in association with pregnancy.[4]

[4] Since reading the above paper I have heard from Mr. Morgan that the patient subsequently became pregnant, went safely to term, and was delivered of a healthy child.

A CASE SHOWING DIVISION OF THE CLAVICLES INTO TWO HALVES, WITH OTHER BONY DEFORMITIES; CLEIDO-CRANIAL DYSOSTOSIS.

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THE subject of this note was brought to the Victoria Hospital in March, 1905, for dyspepsia and my clinical assistant at that time, Mr. Harold J. Jäger, while examining the chest called my attention to the condition of the clavicles, each of which was in two parts. The following is an account of the case.

The patient, a female, aged 12½ years, was a rather thin child, of normal height for her age (4 feet 8 inches, or 142 centimetres), with a large-looking head. Her weight was 4 stones 8 pounds. The family history showed that the maternal grandfather died from Bright's disease and a maternal uncle from consumption. The mother had chorea when 13 years old. One year after her marriage this child was born, and two years later a boy. After this second confinement the mother began to suffer from what was at first regarded as neurasthenia and later as Bright's disease, but after six years it was recognised to be myxœdema, for which she had been continuously and successfully treated since. Lately two other children had been born, aged respectively three and two years. The labours were all normal. The mother said that all the children except the patient were well developed, and this was so in one of them whom I have seen. The mother's bony system showed no deformity. The patient had not suffered from any other complaint than that for which relief was sought. Her father had frequently remarked that there was something wrong with the shape of her chest.

On examination of the child two little knobs were seen to present themselves beneath the skin at the centre of the clavicles. These two small rounded prominences, especially on the left side, were the contiguous ends of the two segments which composed the bone, and were freely moveable upon one another but could not be separated by pulling out the shoulder; there appeared therefore to be a loose joint. The adjoining ends were enlarged; no definite ligament could be felt. Each half of the bone was 1½ inches (or 3·75 centimetres) long. During rest the inner halves extended upwards and outwards from the sternum, and the outer downwards and outwards, so that they formed a wide angled inverted V, thus ^. The sterno-cleido-mastoid and the pectoralis major were attached to the inner portion, the trapezius and deltoid to the outer. The shoulders fell together and the scapulæ projected behind, a hollow being left between them and the spine. The impression given was, in the mother's words, that the child was very narrow chested. The illustration shows the wide mobility permitted by the abnormal clavicles.

On examination with the x rays the fragments appeared to be much less ossified than the ribs and were difficult to see plainly. The child showed other deformities. The sternum was depressed from the level of the third costal cartilage downwards. The cranium was not normally developed; it was large, relatively to the face, and globular in shape, bulging over the ears, with prominence of the frontal regions. The circumference of the head was 21½ inches (54·4 centimetres), this being slightly above the average for her age. The palate was high. The teeth were irregular. In the upper jaw the milk incisors were drawn when the child was two years old for pain and their successors had not yet appeared. The canines and bicuspids and one molar were present on each side. In the lower jaw three permanent incisors were present, spaced far apart, and one bicuspid and one molar on each side. The right bicuspid was irregularly placed. All the incisors and bicuspids should be present at this age. Three teeth were carious. The thoracic and abdominal viscera and the limbs presented no abnormal signs. The thyroid body could be felt. The nervous system was normal. The patient was intelligent and in the sixth standard at school, though the mother thought that she was not so bright as she had been.

The shaft of the clavicle, the first bone in the body to ossify, has usually been regarded as arising in membrane

from a single centre, appearing at about the sixth week, there being an additional centre for the sternal end which does not form until the eighteenth or twentieth year. Although, however, ossification commences in this way from one centre, it afterwards, according to Quain's "Anatomy" (tenth edition), progresses at both ends in cartilage as well as in fibrous substance. If this be so it seems possible that in such a case as this the membrane centre has not appeared, the two portions which are present being the inner and outer cartilaginous parts referred to. These portions are very imperfectly ossified, for when looked at with the x rays they did not compare in distinctness with the ribs, and in a

photograph could hardly be made out. According to Paterson [1] it is probable that the clavicle contains more than one morphological unit, but this observer regards the outer part of the bone as ossified in membrane and the inner in cartilage.

That the shaft of the clavicle may form in two parts is shown by a number of recorded instances in which only one part has been present, either medially or laterally placed. One such was recorded by Walsham,[2] also by Grass,[3] the outer part being absent and the trapezius and deltoid getting their attachment to the acromion process of the scapula; and several other observers, including Schorstein [4] and George Carpenter [5] in this country, have recorded cases in which the clavicle was only represented by rudimentary inner or outer portions, or both, or was absent. Two cases in which the clavicular deformity was closely similar to that here described are reported by Preleitner [6] occurring in a brother and sister, aged 12 and eight years respectively. In the case of the boy tense bands were felt passing from one fragment to the other; the joint was freely moveable and the shoulders could be met in front without pain. The sternal fragments in both these cases were about double the length of the acromial, the measurements being 6 and 3 centimetres in the one and 5 and 3 centimetres in the other. The deformity is clearly developmental. The possibility of fracture *in utero* or at birth is excluded by the symmetry of the lesion on each side. It is interesting to note that Preleitner regarded his first case as a double pseudo-arthritic united fracture, but changed his view on finding that the sister had the same deformity and that the labours were normal. Such a development or complete absence of the clavicles is usually associated with deficiencies of other membrane bones.

I am indebted to Dr. F. J. Poynton for the reference to the paper of Marie and Sainton. These observers [7] described cases in which absence or deformity of the clavicles was associated with a globular cranium with frontal or parietal bosses, imperfect ossification of the fontanelles, a high or deficient palate, and irregular teeth, the malformations being hereditary and present in one instance in a father and son and in another in a mother and daughter. To this condition they gave the name of sterno-cleido-dysostosis. It is now fairly well established that the majority of published cases of clavicular deformities show in addition one or other of this group of malformations. In one of Preleitner's patients above referred to, that of the girl aged eight years, the photograph shows clearly enlargement of the cranium relatively to the face. Villaret and Francoz [8] have published an excellent summary of 28 recorded cases, with some good photographs. Abram has recently shown a case in this country [9] of a more severe type than the one here described. Although we are indebted to Marie and Sainton for naming this group, it may be noted that Scheuthauer noticed the association between the deformity of the clavicles and the cranium in 1871. The case here described should also, no doubt, be regarded as one of cleido-cranial dysostosis. The fontanelles were closed, but the clavicular deformity, the globular head, the arched palate, and the irregular teeth combine to form a clinical picture similar to that of the cases of Marie and Sainton.

No hereditary connexion with a similar deformity in the mother is present in this case. I have not seen the father, but the mother says that his collar-bones are all right and that he is exceptionally strong and accustomed to lift heavy weights, and this is against the probability of there being a malformation of the shoulder-girdle. The presence of myxœdema in the mother is worthy of remark. She first noticed an affection of her health two years after this child was born—a boy, said to be normal, having been born in the interval. Other healthy children have been born since she has been under treatment with thyroid extract. This is the third case in which I have seen some developmental defect in the child of a myxœdematous mother.

Mr. R. E. Humphry, late house surgeon at the Victoria Hospital for Children, kindly took the photograph of the patient.

Bryanston-street, W.

[1] Brit. Med. Jour., 1902, vol. ii., p. 77.
[2] Proceedings of the Medical Society of London, vol. xii., 1889, p. 277.
[3] Münchener Medicinische Wochenschrift, 1903, p. 1151.
[4] THE LANCET, Jan. 7th, 1899, p. 10.
[5] THE LANCET, Jan. 7th, 1899, p. 13.
[6] Wiener Klinische Wochenschrift, 1903, p. 70.
[7] Marie et Sainton: Bulletin et Mémoire de la Société Médicale des Hôpitaux des Paris, 14, 3 s., p. 706, 1897.
[8] Nouvelle Iconographie de la Salpêtrière, 1906.
[9] THE LANCET, August 17th, 1907, p. 429.

A PLEA FOR THE UNIFORMITY OF CONDITIONS IN VACCINATION.

BY A. H. GERRARD, M.D. LOND., M.D. STATE MED., D.P.H. OXON.

AT the present time the source from which calf lymph is obtained, practically speaking, is under no control or supervision except in the case of that used for public vaccination. The lymph supplied in this instance is made under the most rigid precautions by the Local Government Board, and each

batch is carefully registered. This, of course, is as it should be. On the other hand, the vaccination as carried out by the general practitioner is free from all restrictions or safeguards. He may obtain his vaccine from wherever he likes, he may carry out the procedure in whatever way he may wish, and he may scarify in as many or as few places as his convictions or his patients dictate. He may also, if he cares to, return the slightest reaction as successful vaccination. He is under no supervision whatever. In such an important matter as vaccination where the benefit to the patient is not immediately apparent it is very serious if the operation is carried out by any means not ideal from a surgical point of view.

All this might easily be obviated were vaccination completely under State control. This could easily be carried out without in any way disturbing the present public vaccinators, who undoubtedly carry out their work with great efficiency and with little friction. All that is required is to compel all vaccination to be done under present public vaccination conditions, both with regard to procedure and payment. Vaccination would then have a definite meaning. Undoubtedly those children who are vaccinated by the public vaccinator are protected more efficiently and with the least possible risk. From my observations on some hundreds of cases I have never seen a public vaccination go wrong in any way. Strangely enough, in this matter the pauper is far better off than the prince. That is to say, the independent person who wishes to pay for his own vaccination cannot get as good conditions as the individual who accepts the gratuitous services of the State. Especially is this so in the matter of the quality and purity of the lymph used.

Most of the lymph on the market to-day is sold as glycinerated calf lymph, which, if manufactured in the manner originated by Dr. S. Monckton Copeman, should be free from extraneous organisms. It was with a view to looking into the matter of the relative purity of calf lymph that eight samples of glycinerated calf lymph were purchased in open market. All the specimens were examined microscopically and in none was there found anything but epithelial débris. For the purpose of bacteriological examination the following procedure was followed. Each tube of lymph was file-marked near the end and then washed in 1 in 20 carbolic followed by sterile water and dried. The end of the tube was broken off, the cut edge flamed, and the sealed end containing a small portion of air was heated gently. This expelled the lymph which was caught in 10 cubic centimetres of sterile broth. This was then mixed and used as a standard dilution. Tubes of broth—glucose broth—and Löffler serum, agar, and gelatin plates were inoculated with one loopful of the above and the results of incubation are shown in the following table:—

Sample.	Broth.	Löffler's serum.	Gelatin plates.	Glycerine agar plates.	Glucose broth.	Glucose broth cultivated anaerobically.
1	No growth.	White colonies.	Completely liquefied.	Large number of white colonies.	Turbid growth; no gas.	Turbid growth; no gas.
2	Turbid growth.	Numerous white colonies; three liquefiers.	15 colonies.	20 white colonies; 13 yellow colonies.	Turbid growth; no gas.	Growth and gas.
3	Slight turoid growth.	White colonies.	22 colonies.	10 white colonies; 4 yellow colonies.	Slight growth.	No growth.
4	Turbid growth.	Several liquefying colonies.	10 colonies, some liquefiers.	1 white colony; 1 yellow colony.	Turbid growth; no gas; film on surface.	Film on surface.
5	No growth.	Several white colonies.	4 white colonies.	4 colonies	Growth at bottom of tube.	No growth.
6	No growth.	No growth.	17 colonies.	5 greyish colonies.	No growth.	No growth.
7	Turbid growth.	Yellow and white colonies.	1 yellow colony; 1 white colony.	Fine granular colonies.	Turbid growth.	Growth.
8	Stringy growth.	No growth.	1 liquefying colony.	Fine granular growth.	No growth.	No growth.

All the colonies in the various media were sub-cultured and investigated with regard to the presence of staphylococci and streptococci with the following result:—

Sample 1 contained staphylococcus albus and short chains of cocci not more than four long.

Sample 2 contained staphylococcus albus and aureus, also a few bacilli suggestive of pseudo-diphtheria bacilli.

Sample 3 contained staphylococcus albus and aureus and motile bacteria.

Sample 4 contained staphylococcus albus and aureus, short chains of cocci—large actively motile rods, and pseudo diphtheria-like bacilli.

Sample 5 contained staphylococcus albus—a leptothrix—long chains of streptococci.

Sample 6 contained no staphylococci but motile bacteria in chains.

Sample 7 contained staphylococcus albus and aureus—short chains of cocci.

Sample 8 contained streptococci in abundance and a staphylococcus albus.

The streptococci in samples 5 and 8 were isolated in Drigalski's plates and obtained in pure culture. They were then grown in milk. The culture was injected into a mouse which died on the second day, but the streptococcus was not recovered from the blood. Samples 5 and 8 were both obtained from the same manufacturer. I was fortunate enough to be able to compare these results with those obtained by subjecting three tubes of Local Government Board lymph to a similar method of examination. Without going into details the lymph supplied by the Board was uniformly freer from organisms, gelatin plates only giving one or two colonies of staphylococcus albus and citreus and no other organisms. On the other hand, none of the tubes were sterile.

These results then go to show that commercial glycerinated calf lymph is not so carefully prepared as that issued by the Local Government Board, that many of the samples contain the organisms of suppuration, and that at least one sample contains very definite streptococci. The Local Government Board lymph is practically as sterile as an article of that character which is subject to manipulation can be, the few organisms it contains being probably due to air contamination in filling the tubes, &c. Some of the purchased samples suggest the absence of glycerine. In such circumstances, then, it is too much for the practising physician to look to the Government to help him in a matter of this kind. Large sums of public money are spent yearly in supplying the public vaccinator with pure calf lymph, yet the same is denied to the practitioner. Surely he might be allowed to purchase his lymph from the Government and thus obtain with it a guarantee of its purity and source. There should be no difficulty about such an arrangement. Most firms that send out lymph send it out in numbered batches, so that in the case of untoward results the source can be traced and the results of other tubes from the same batch compared. This is also done by the Local Government Board. The machinery is already at work, it only requires a little extension.

PULMONARY REGURGITATION DUE TO VEGETATIVE ENDOCARDITIS CONSEQUENT UPON RUPTURE OF ANEURYSM OF HEART.

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APART from congenital malformation and intra-uterine disease, pulmonary regurgitation is an event of such infrequency as to deserve notice, especially when in addition to being diagnosed during life its existence is confirmed by examination after death. The cardiac lesion about to be described is so unusual that I offer no apology in craving for it a place in the pages of this journal. The patient, a labourer, was a married man, aged 37 years. He was admitted into the Royal Victoria Infirmary, Newcastle-upon-Tyne, on Nov. 3rd, 1906, suffering from dropsy of the feet and legs, pain in the chest, and slight difficulty of breathing. In 1889 he fell from a scaffold and injured his left chest. A few of his ribs were broken. Shortly after the accident he spat up blood. There was no history of rheumatism. The patient stated that he had had pain over the region of the heart for the last six years, accompanied by shortness of breath on exertion. Within the last few months he had had

more trouble and discomfort in the region of the heart than formerly. Seven weeks before his admission into the infirmary he spat up blood the colour of which was bright red. No specific history was obtainable, but the patient admitted a far too free indulgence in alcohol. In October, 1906, he began to experience cold sensations in his back which gradually crept round to the front, attended by considerable difficulty of breathing and accompanied by pain in the left side of the head and chest, especially over the site of the ribs that were injured at the time of the accident. These attacks of pain, which often extended to the præcordium, lasted for several days, were often severe, and were usually relieved by the application of warmth. Three months ago he noticed that his abdomen was commencing to swell, but notwithstanding this circumstance and the facts already alluded to he continued to follow his occupation until eight weeks before his admission into the infirmary, when he gave up work on account of increasing distension of the abdomen and inability to stoop. 14 days ago his feet and legs began to swell. Three months ago his urine was said to have been coffee coloured.

On examining the chest the area of cardiac dulness extended to a higher level upwards and to the left than in health. The apex beat was diffused and was felt in the fourth interspace just internal to the left nipple line. A marked systolic thrill could be felt over the left base of the heart. The site of its maximum intensity was the second left interspace. No thrill was felt by the fingers plunged deeply into the episternal notch, nor was there any thrill in the arteries of the neck. Over the apex area and pretty well all over the left side of the chest a loud systolic murmur could be heard. The line of conduction of this murmur was from the second left interspace outwards towards the external border of the pectoral muscle. No systolic murmur was heard in the arteries of the neck on either side, but that which was heard at the apex was audible as far as the left axilla. In describing the cardiac murmurs I find on referring to my clinical notes that "just internal to the apex beat another systolic murmur is heard which is conducted inwards and is of a different character to that at the apex; it is rough and harsh." Down the left side of the sternum systolic and diastolic murmurs were heard. The superficial veins of the neck were distended and they pulsated. Over the upper part of the left chest posteriorly a loud systolic murmur was heard. The respiratory sounds were audible over the upper part of the chest behind on both sides, but they were feebler than usual. The abdomen was distended and contained fluid. The liver was enlarged; its lower border could be felt below the right costal arch. The spleen was much enlarged; its lower border could be readily felt below the left ribs. The pulse-rate, which was 84 and of low tension, was not water-hammer in character and was slightly irregular. The red corpuscles in the blood numbered 4,800,000, the leucocyte count was normal, and the hæmoglobin was 65 per cent. The urine was of specific gravity 1011 and was acid; it contained albumin but neither blood nor sugar.

On Nov. 29th the patient had a rigor which was followed by a rise of temperature. The heart was now felt beating half an inch external to the nipple line and the thrill over the second and third left costal cartilages was more pronounced than formerly, while the double murmur heard here was if anything louder and coarser than before. There was no thrill in either the episternal notch or in the arteries of the neck. On comparing the cardiac murmurs heard in the second right and left interspaces it was noticed that while to the right of the manubrium sterni only a systolic murmur was heard there could be readily heard to the left a loud systolic and diastolic murmur, and that the double murmur was heard as far out as the anterior border of the left axilla. Crepitations were noticed at the base of the right lung on Dec. 1st. The pulse was 110, the temperature was 103·3° F., and there was slight diarrhœa. Next day the pulse was 140, the respirations were 32, crepitations were heard over both bases, diarrhœa continued, the urine contained blood, and the patient looked extremely ill. These symptoms gradually increased and he died on Dec. 3rd.

At the post-mortem examination, which was made by Dr. R. A. Bolam, a small quantity of blood-stained fluid was found in the pericardium and there were signs of old pericarditis. The left ventricle was dilated and hypertrophied and the aortic valves were healthy. The mouth of the pulmonary artery was choked up by recent vegetations mostly clinging to the ventricular side of the valves and to the wall of the pulmonary artery behind the valves; there was very marked incompetence of the valve. The right ventricle was only slightly enlarged, the walls being rather thicker than usual. On opening the left ventricle there was found an aneurysmal swelling of the wall of the heart. There was an opening into the aneurysm from the left ventricle. The orifice was just above the apex; it was round, smooth, and fairly thick-edged and was large enough to admit the tip of the little finger. The opening led into an irregular cavity in the myocardium which lay between the two ventricles and therefore involved the septum. This cavity also communicated with the right ventricle by an opening almost immediately under the valves of the pulmonary artery. The other valves and orifices were healthy. The heart weighed 19 ounces. The lungs were œdematous, the bases were deeply congested, and at places were slightly adherent. The liver was enlarged, fatty and cirrhotic; it weighed 4 pounds 1½ ounces. The spleen was enlarged, weighing 3 pounds 7 ounces and it was slightly adherent. The kidneys were pale and were the seat of numerous small hæmorrhages. The peritoneal cavity contained a small quantity of blood-stained fluid. In an agar culture made from the vegetations on the pulmonary artery Mr. H. J. Hutchens, of the bacteriological department of the College of Medicine, found the staphylococcus aureus, non-pyogenic streptococci, and numerous non-pathogenic bacilli.

Aneurysm of the heart is rare, but for a cardiac aneurysm to rupture into the right ventricle and give rise to vegetative valvulitis of the pulmonary artery leading to incompetence is an event of even rarer occurrence. The diagnosis made during life was cirrhosis of the liver and pulmonary regurgitation. The physical signs which led to the diagnosis of pulmonary regurgitation were the situation and distribution of the double murmurs heard over the second and third left interspace, absence of thrill and of murmur in the carotid arteries, while these were pronounced over the second left interspace; absence of thrill in the episternal notch, and absence of water-hammer pulse. Malignant endocarditis was suspected from the temperature, the sweating, and the intermittent presence of blood in the urine. The aneurysm of the heart was neither diagnosed nor suspected, although the possibility of an aneurysm communicating between two blood channels was entertained and discussed at the bedside. What had occurred was an infection of the pulmonary artery by débris which had escaped from the upper opening of the cardiac aneurysm just below the segments of the pulmonary valve.

Medical literature dealing with incompetence of the pulmonary artery is scanty. Lesions of the pulmonary artery are usually divided into those arising during intra-uterine life, and therefore congenital, and into those which are extra-uterine. Most of the lesions of the pulmonary artery arising after birth are the result of the action of micro-organisms. Constantin Paul [1] reminds us that incompetence of the valves of the pulmonary artery may be the result of endocarditis or of atheromatous degeneration which thickens and shortens the free borders of the valves. This statement is the outcome rather of reading than experience. In a case reported by von Wahl the endocarditis had destroyed nearly the whole valve. An inflammation creeping up from a limited myocarditis has been known to cause perforation of the valves and give rise to both obstruction and regurgitation. It is generally stated that in pulmonary incompetence the right ventricle and auricle are after death found to be dilated and hypertrophied and that occasionally the pulmonary artery is also dilated. What impressed me in the case I have just reported was the very slight increase in the size of the right ventricular cavity compared with the thickness of the walls, also the absence of infarcts in the lungs. During the time the patient was in my ward there was, practically speaking, no expectoration, pain was not much complained of, nor was dyspnœa a prominent feature, notwithstanding the distended abdomen, enlarged liver and spleen, all of which one would have expected would have had some effect, if only mechanical, upon respiration. Constantin Paul says that he has never met with a case of incompetence of the valves of the pulmonary artery confirmed by necropsy. The pulmonary artery, like the aorta, may become the seat of atheroma and give rise to thickening of the walls of the right ventricle and increased size of the chamber, but as atheroma is usually present in the aorta at the same time it is difficult to assign to the lesion of the pulmonary artery its share in

[1] Diagnostic et Traitement des Maladies du Cœur.

producing physical signs and symptoms unless possibly it be a greater tendency for infarction of the lung to take place. The existence of a thrill over the left base of the heart and a systolic murmur carried well to the left would suggest a diseased condition of the valves or wall of the pulmonary artery. In "Maladies du Cœur" Michel Peter says that apart from stenosis of the pulmonary artery incompetence of the valves of this vessel is not known, and that when dilatation of the artery arises in the course of pulmonary stenosis and is followed by insufficiency it is comparable with dilatation of the aorta in aortic incompetence. Byrom Bramwell in his treatise[2] alludes to the rarity of pulmonary regurgitation and remarks that the lesion hardly ever results from the simple form of endocarditis or from atheroma, also that when it develops slowly in the adult there will probably be shortness of breath, cough, and other indications of pulmonary derangement.

What was the cause of the cardiac aneurysm? Had there been a myocarditis followed by softening? There were no signs of rheumatic endocarditis present in my patient but there had evidently been a limited pericarditis years ago. There was no evidence of disease of the lung of such a nature as likely to have allowed of small clots having been carried away by the pulmonary vein to the left heart and after passing through the left ventricle of having gained an entrance into and blocked one of the coronary arteries. No thrombosed branch of a coronary artery was found, and yet such an event offers the best explanation of the initiation of the structural changes in the myocardium and its blood-vessels which led to aneurysm and to the escape of infective material on to the pulmonary valves. There was no focus of pus found anywhere. I am not aware of any case in medical literature exactly the same as the one I have recorded, although there have been several instances of vegetative endocarditis of the right heart and pulmonary artery having occurred in the course of puerperal septicæmia.

While not directly bearing upon the subject as presented in the above form I cannot close this paper without referring to the interesting chapter on Pulmonary Incompetence in Diseases of the Heart and Aorta by Dr. George A. Gibson, and particularly to his remarks upon relative or functional incompetence of the pulmonary cusps. It is not always easy to interpret accurately the meaning of a diastolic murmur heard over the pulmonary artery and its relation to aortic incompetence, also of the short blowing diastolic murmur occasionally heard at this site in cases of mitral stenosis and which may be due to slight regurgitation through the pulmonary orifice. That under heightened pulmonary tension a leak occurs through the pulmonary valve and is revealed by a diastolic murmur there can be scarcely any doubt. The theory has received the support, among others, of Sir James Barr and Dr. Graham Steell. Gibson's experiments show that the orifices of the right side of the heart are not closed so perfectly as those of the left and that they become incompetent with supernormal pressures. Although the second right intercostal space is the usual site of the diastolic murmur in aortic incompetence, in a large number of cases this murmur is best heard to the left of the sternum and is frequently carried to the apex, a line of conduction never observed with the murmur of pulmonary incompetence.

Newcastle-upon-Tyne.

NOTE ON TREATMENT OF TRIGEMINAL NEURALGIA BY INJECTION OF OSMIC ACID INTO THE GASSERIAN GANGLION.

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IT seems worth while briefly to record these two histories since the method employed appears to involve much less risk to the patient than does extirpation of the Gasserian ganglion. The lapse of time since the operation is, of course, too short to enable me to say that the relief is permanent and the operation is not an easy one, but the result so far is quite sufficiently good to justify a further trial of a plan which, so far as I am aware, has not been hitherto applied to the ganglion itself.

In February, 1904, I published[1] a record of some cases which I had treated by injection of nerves by the osmic acid method, so that I need not now give any details of the proceeding, nor is it necessary to repeat the history then given of the development of the method of which the present operations are an extension. One of the patients on whom the procedure now to be described was carried out was in the former record, so that I need only briefly recapitulate his story.

The patient, a man, aged 58 years, was first operated upon by me in 1902 and was free from pain for 12 months; after that time the pain slowly returned and three further operations by injection of osmic acid into peripheral nerves were performed in February and March, 1907. Only slight and temporary improvement followed the injections and on re-admission in April he was anxious to have some further attempt made to relieve him. The man was ill nourished and thin with very rigid arteries and was altogether a very unfavourable subject for any severe operation and I was not at all sanguine as to the result of removal of the Gasserian ganglion. In this view I was supported by the opinion of my colleague, Mr. W. Thorburn. Mr. Thorburn and our resident surgical officer, Mr. P. R. Wrigley, and my house surgeon, Dr. P. Ferguson, and I were talking over the case and discussing the possibility of some less dangerous method of procedure, when it was suggested that as the nerve trunks had already been dealt with at the sigmoid notch we might trace them up to the foramen ovale and there inject the osmic acid into the Gasserian ganglion through the foramen without opening the skull or disturbing the brain. With the help of Dr. C. M. Craig, one of our demonstrators of anatomy, and Dr. Ferguson, I tried the operation in the dissecting room, and finding it possible I did it on our patient on May 1st. The patient was anæsthetised with chloroform and an incision was made from above the zygoma downwards and curving forward along the lower border of the jaw. The zygoma was resected and turned down and the coronoid process was divided and turned up. The inferior dental and lingual nerves were found and traced up to the foramen. By means of a curved dental syringe a few drops of 2 per cent. osmic acid solution were injected into the ganglion through the foramen. The nerves were then torn away and the wound was closed. Very little shock followed the operation in spite of the feeble condition of the patient and he was up and walking about in the grounds of the hospital on the fourth day. Some discharge of saliva from the wound caused inconvenience for a time, but practically there was no other trouble. He was seen at intervals of a month up to August—i.e., three months. He was quite free from pain, had put on weight, could masticate easily, and was altogether in a very satisfactory state. Since the foregoing was written the man has been again seen (November, 1907) and has had some attacks of severe pain in the ophthalmic division, though the second and third portions have given no trouble.

A second patient, a woman, aged 55 years, had osmic acid injected into the mental nerve in February, 1904, for severe neuralgia of 16 months' duration. She was readmitted in January, 1906, for return of the pain from which she had been free for 16 months after the operation.

On admission in January, 1906, the patient was found to present a characteristic case of severe trigeminal ("epileptiform") neuralgia, chiefly affecting the terminal branches of the inferior dental nerve but extending to the ear and infra-orbital areas and to the tongue which showed unilateral furring. On Jan. 12th the mental nerve was again injected but relief only lasted for two or three days and on the 17th the inferior dental and lingual nerves were exposed by trephining the jaw just below the sigmoid notch and were injected with osmic acid. Relief from pain again followed for the same period, 16 months, but the pains on her readmission in May, 1907, were as bad as ever and her general condition was correspondingly depressed. On May 31st an operation similar to that of the other case was performed with a similar result. There were a little suppuration and some salivary leakage for a time but the pain was gone. She remained well on Sept. 18th.

I have purposely omitted details and condensed the reports of these cases because the time is much too short to warrant a conclusion that the operation is a permanent success, but it is an operation causing so much less strain upon an exhausted patient than does removal of the ganglion that I

[2] Diseases of the Heart.

[1] Medical Chronicle, February, 1904.

think it is worth further trial and observation and I hope later to give a further report of these cases. The effects of injection of osmic acid in producing degeneration of tissue are very well marked and, if the ganglion can be destroyed by the means described, relief may be obtained at considerably less risk than is incurred in the operation for its removal.

I am indebted to Dr. Ferguson and to Dr. Fleming, Dr. Howe, Dr. Walker, and Dr. White, my former dressers, for notes of the cases.

Manchester.

AN OUTBREAK OF FOOD POISONING DUE TO EATING BRAWN.

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ON Sept. 11th last at a meeting of the Maldon rural district council Dr. J. C. Thresh was informed that many cases of food poisoning had occurred in Tollesbury in that district and in neighbouring parishes in the Lexden and Winstree rural district. The cases occurred five or six days previously. With the consent of Dr. J. W. Cook, medical officer of health of the Lexden and Winstree rural district, Dr. Thresh deputed me to inquire into the nature and cause of the outbreak. 80 cases in all were discovered. The illness was of sudden onset and was characterised by rigors, abdominal pain, vomiting, and diarrhœa of about 24 hours' duration and was followed by great prostration, lasting in some cases for a fortnight. In two cases an itchy petechial eruption confined to the arms and legs appeared a few days after the initial symptoms, and in one case acute lobar pneumonia set in three days afterwards. There was no ophthalmoplegia, diplopia, or strabismus, and there were no nervous symptoms of central origin. In all these cases pork brawn had been partaken of from one-half to four hours prior to the onset of the illness, and on inquiry it was found that this brawn had been obtained from one source. The pork butcher who made and sold it said that it was prepared in the following manner. The bones, "rhinds" (skin), and eye-pieces (half the face and head with eyeballs and brains removed) of five pigs killed 24 hours previously were boiled with water in an iron boiler for from four to six hours and afterwards were put out to cool about 20 yards from the slaughter-house. When the temperature had fallen to about 100° F. the bones were removed with a large wooden spoon kept for the purpose, the spices (all-spice, pepper, and salt)[1] were then added, and the brawn was poured into separate dishes containing from four to 16 ounces each and allowed to set. No preservative of any kind was added and the brawn was sold in these dishes on the following day, Sept. 6th. 42 people ate it on that date and 13 were ill, 71 people ate it on the 7th and 65 were ill, while four ate it on the 8th and all were ill. (N.B.—Two people were ill on two dates having partaken of it twice.) A dog got some on the 10th and shortly afterwards was taken "queer," lying about and refusing its food, but it was given castor oil and soon recovered. All the patients took but little of the brawn, about an ounce or so, and the symptoms were apparently most severe in those partaking of it on the 7th and 8th. As the pork butcher could not understand why so many cases of illness should have arisen from eating brawn which he had prepared in a similar way for 20 years he retained a portion and this he handed over to me for examination on Sept. 13th. The sample, about four ounces, showed signs of decomposition. A portion was used for examination for toxins and ptomaines and the remainder for bacteriological examination. A search was made for food poisoning organisms in the following manner. An emulsion of scrapings from the outside of the brawn (referred to as A), about 1 gramme to 100 cubic centimetres, was made with sterile water and also a similar emulsion with a portion from the inside (referred to as B). 30 cubic centimetres of emulsion A were put into glucose neutral red broth; fluorescence was produced in 48 hours, and microscopical examination of the liquid showed motile Gram-negative coli-like organisms in large numbers, a few longer Gram-positive bacilli, and some short chains of streptococci. Emulsion B treated in a similar way did not give fluorescence in 48 hours, but coli-like organisms were abundant. 20 cubic centimetres of emulsion A cultured anaerobically in sterile milk after heating for 15 minutes at 80° C. gave no reaction. 20 cubic centimetres of emulsion B similarly treated brought about slow decomposition of the milk with production of much gas and a putrid odour indicating the presence of the bacillus cadaveris sporogenes. A looplet of each emulsion was next put into MacConkey's glucose broth[2] and allowed to incubate at 98° F. for 24 hours when much acid and gas resulted, and plates on Conradi-Drigalski nutrose litmus lactose medium were made from each. Those obtained from emulsion A yielded equal numbers of blue and red colonies, while those from emulsion B gave blue colonies to red in the proportion of 1 to 12. From these plates several red colonies were selected and were found to produce indol in 24 hours, acid and gas in litmus lactose gelatin, and fluorescence with or without gas production in neutral red saccharose gelatin. These results place the red colonies obtained in the coli group. 20 blue colonies were next selected and their action was tested on the following media: broth, lactose, saccharose, dulcite and mannite litmus broth with Durham's tubes for noting gas production, and litmus milk. The results obtained gave three classes of bacilli with the following characteristics:—

Class.	Broth.	Lactose.	Saccharose.	Dulcite.	Mannite.	Indol.	Litmus milk.	Morphology.	Gram.	Percentages.
Class I. ...	G.T.	*Nil.*	*Nil.*	A.G.	A.G.	*Nil*	Acid 24 hours; then slowly alkaline.	Motile bacillus.	Negative.	5
Class II. ...	G.T.	,,	A.G.	A.G.	A.G.	,,	Acid; clot formed slowly.	,,	,,	30
Class III.	G.T.	,,	A.G.	*Nil.*	A.G.	,,	Acid; clot formed slowly.	,,	,,	20
Bacillus enteritidis of Gaertner* (2)	G.T.	,,	*Nil.*	A.G.	A.G.	,,	Acid 24 hours; then slowly but strongly alkaline.	,,	,,	—

* Put on for purposes of comparison.

G.T. = general turbidity; A.G. = acid and gas. The percentages indicate the proportion in which these organisms were found. The other organisms isolated resembled the coli group in certain essential details.

One representative of each of the three classes was selected and tested against the sera[3] of animals immunised against the bacillus enteritidis of Gaertner (limit of agglutination with immunising organism 1 in 1000), bacillus paratyphoid A (Brion and Kayser) (limit of agglutination against immunising organism 1 in 100), and paratyphoid B with the following results:—

Class.	Gaertner serum.			Paratyphoid A serum (Brion and Kayser)		Paratyphoid B serum.
	1 in 100	1 in 240.	1 in 1000.	1 in 100.	1 in 240.	1 in 100.
Class I. ...	++	+	?	*Nil.*	Not done	*Nil.*
Class II. ...	++	+	?	?	*Nil.*	,,
Class III....	+	?	*Nil.*	*Nil.*	Not done.	,,

++ = complete clumping + = nearly complete but some free bacilli. ? = a few clumps with many free bacilli.

[1] Samples of all these were examined by Dr. Thresh and found to be satisfactory.

[2] The majority of food poisoning organisms are dulcite fermenters, and by means of primary differential culture in dulcite media the dulcite fermenters are found in increased proportion (A. E. Boycott, Journal of Hygiene, 1906, vol. vi., p. 35). A glucose medium was selected as being of more general application for all classes of organisms of intestinal type.

[3] For these sera and bacilli I am indebted to Dr. W. G. Savage of Colchester. The sera were prepared by immunising rabbits with the organisms in question, and were withdrawn from the rabbits in March, 1907.

The researches of Durham,[4] Morgan,[5] Boycott,[6] and others have proved that bacilli react with homologous but not with heterologous sera. This fact places Classes I. and II. and possibly Class III. as allies of the bacillus enteritidis of Gaertner. Unfortunately the original degrees of agglutination of these sera were not high, and high limits of agglutination with homologous organisms could not therefore be expected. It next became necessary to ascertain to what extent the sera of affected patients reacted with the isolated and closely allied organisms and I obtained the sera of six patients for this purpose. The following table indicates the results obtained :—

Sera.	Organism Class I.			Organism Class II.			Organism Class III.			Bacillus enteritidis (2) of Gaertner.			Bacillus paratyphoid A (2) (Brion and Kayser).	
	1 in 100	1 in 500	1 in 1000	1 in 100	1 in 500	1 in 1000	1 in 100	1 in 500	1 in 1000	1 in 100	1 in 500	1 in 1000	1 in 100	1 in 500
A.D.*	++	++	+	++	++	+	+	?	*Nil.*	++	+	*Nil.*	+	*Nil.*
M.D.	++	+	*Nil.*	++	+	*Nil*	+	*Nil*	,,	+	?	,,	*Nil.*	,,
A.S.	Not done	+	,,	Not done	+	?	Not done	?	,,	+	?	,,	+	,,
M.S.	,,	+	,,	,,	+	?	+	*Nil.*	,,	+	?	,,	+	,,
G.B.	,,	+	,,	,,	+	*Nil.*	+	,,	,,	+	?	,,	*Nil.*	,,
C.H.	,,	+	,,	,,	+	,,	+	,,	,,	+	?	,,	,,	,,

* Serum of this patient clumped organisms belonging to Class I. and Class II. in a dilution of 1 in 5000 but not completely.

The laboratory culture of the bacillus typhosus was not agglutinated by any of these sera. Normal serum did not agglutinate any of these organisms.

Here, then, we have groups of organisms isolated from the pork brawn which react with the sera of affected patients and also with the sera of animals immunised against known food poisoning organisms. It seems probable from the sera tests that they are organisms of the enteritidis type and from the cultural reactions as well. Class I. seems to be identical with the bacillus enteritidis of Gaertner. Which of them was the exciting cause of the present outbreak became a question of virulence. Dr. J. W. H. Eyre and Dr. W. G. Savage therefore very kindly carried out animal experiments and I am greatly indebted to them for their reports which are as under.

REPORT BY DR. SAVAGE ON ISOLATED ORGANISMS.

Cultures I., II., and III.—Oct. 7th: Mouse injected subcutaneously with one cubic centimetre of an equal mixture of two-day broth cultures of Nos. I., II., and III. mixed—i.e., about one-third of a cubic centimetre of each injected. Mouse well 8th, 9th, and 10th. 11th: Found to be very ill and in a dying condition. Animal killed. Post-mortem examination: Very enlarged dark spleen, and with lighter coloured (apparently necrotic) areas in the liver. Cultivations from spleen and heart blood showed abundant growth in broth. The latter plated out gave numerous colonies, apparently all alike. A number of these subcultured and all alike and = No. I. Evidently, therefore, No. I. is pathogenic to mice and it is doubtful if Nos. II. and III. are, since not recovered post mortem. I should think No. I. is the cause of the outbreak rather than Nos. II. and III.

REPORT BY DR. EYRE ON SPECIMEN OF PUTRID PORK BRAWN RECEIVED SEPT. 16TH, 1907, FROM DR. THRESH.

1. Number of organisms present per gramme, 273,000,000. 2 Organisms present: bacillus coli communis, 10,000,000 per gramme; bacillus paratyphosus type A, 10,000,000: and bacillus enteritidis of Gaertner, 10 000,000. 3. Two mice, each 20 grammes in weight, fed on Sept. 16th, 17th, and 18th with portions of the putrid brawn (no other food being administered). Remained unaffected. 4. Rabbit, 950 grammes in weight, received one cubic centimetre of the thick emulsion of brawn mass after extraction with alcohol, &c. (received from Dr. Thresh Sept. 18th), subcutaneously. No apparent effect. Animal remains well.

The apparent discrepancy between the results of the feeding experiments by Dr. Eyre and the injection of isolated organisms by Dr. Savage finds a parallel in experiments by Professor S. Delépine in connexion with the Manchester outbreak of diarrhœa due to consumption of milk in November, 1894.[7] He explained the fact that large doses of this milk given to two guinea-pigs and two young rats did not produce any distinct illness by the diminution in virulence of the milk due to acid fermentation. In the present case acid fermentation may have played a part in diminishing the virulence of the pathogenic organisms, but it is probable that the putrid state of the brawn when delivered at Dr. Eyre's laboratory 12 days after it was made did not tempt the mice to partake of it in sufficient quantity to cause illness, especially when only 5 per cent. of the blue colonies (or a little more than 1 per cent. of the total number of organisms), even after enrichment by culturing in MacConkey's glucose broth, were pathogenic. It seems clear, therefore, that the pathogenic organisms which had caused such severe symptoms in so many people had in large proportion died out before the analysis was begun ten days after the brawn was prepared.

This outbreak presents many features of interest. 32·3 per cent. of the persons eating the brawn 24 hours after its preparation, 91·5 per cent. of those eating it 48 hours, and 100 per cent.[8] of those eating it 72 hours afterwards were ill. Symptoms began in every case in from half an hour to four hours after ingestion. These facts prove that the germs multiplied in the brawn, that the symptoms were the result of the excessive number ingested, and that the outbreak was due to an actual infection by living bacilli. Dr. Thresh on testing for ptomaines by the Stas-Otto method[9] failed to detect their presence, and detail No. 4 of Dr. Eyre's report shows that poisonous toxins were absent. The rapidity with which the pathogenic bacteria died out is illustrated by the results of the bacteriological examinations begun ten days after the brawn was prepared, by the feeding experiments conducted 12 days afterwards, and also by the comparatively slight symptoms exhibited by the dog which swallowed a large portion of the then putrefying brawn on the fifth day after its preparation.

The important question from the public health point of view is how did the brawn become infected? Only those who ate the brawn were ill. There was no illness of any kind amongst those eating the fresh pork or the sausages sold by the same butcher on the same day from the same animals, and inquiries failed to show that there had been anything amiss with the pigs prior to their being killed. I have described already the method of preparation of the brawn and pointed out that it was put out to cool 20 yards from the slaughter-house where the animals were killed. The researches of Morgan[10] show that organisms of the enteritidis type are obtained with great frequency from the fæces and surface of the intestinal mucous membrane of pigs and other animals. Intestinal organisms of every type abounded in the specimen of pork brawn submitted to examination and nothing more likely can be imagined than that it became infected from the intestines of the recently killed pigs. The infection must have reached the brawn during the cooling stage and before it was poured into separate dishes as all the brawn gave rise to symptoms. Inasmuch, too, as the Drigalski plates from both inside and outside of the brawn showed the presence of intestinal organisms in approximately equal numbers it is obvious that these must have reached it before it was poured into the moulds. Otherwise the interior of the brawn would have contained far fewer organisms. What the particular carrier of infection was it is more difficult to say. The common house-fly certainly carries infection broadcast, as has been demonstrated by numerous observers,[11] and the proximity of the slaughter-house to the cooling place gave abundant opportunities for this agent during the hottest period of this year to bring about inoculation of the brawn. At the same time, it must not be forgotten that the slaughter-house was a private one and the same persons were engaged in slaughtering the pigs and preparing the brawn for the market. The outbreak appears to add another to the list of those due to the use of pig meat and to the presence of

[4] H. E. Durham: An address on the Present Knowledge of Outbreaks due to Meat Poisoning. Brit. Med. Jour., 1898, vol. ii., p. 1797.

[5] H. de R. Morgan: Some Observations upon the Micro-organisms of Meat Poisoning and their Allies. Brit. Med. Jour., 1905, vol. i., p. 1257.

[6] A. E. Boycott: Observations on the Bacteriology of Paratyphoid Fever and on the Reactions of Typhoid and Paratyphoid Sera, Journal of Hygiene, 1906, vol. vi., p. 33.

[7] S. Delépine: The Bearing of Outbreaks of Food Poisoning upon the Etiology of Epidemic Diarrhœa. Transactions of the Epidemiological Society of London, December, 1902.

[8] Only four altogether and they were young children.

[9] Thresh and Porter: Preservatives in Food and Food Examination, 1906, p. 323.

[10] H. de R. Morgan: Ibid.

[11] R. M. Buchanan: The Carriage of Infection by Flies, THE LANCET, July 27th, 1907, p. 216.

the bacillus enteritidis of Gaertner, and although it is doubtful whether any amount of inspection would have prevented it, it emphasises the necessity for regulations and for inspection of premises and of the conditions under which such food is prepared. The water-supply to the parish and premises is limited in amount and not over excellent in quality. It is not such as could be regarded as adequate and suitable for a place of this character. For permission to publish this paper and for much help and advice during its construction I have to express my indebtedness to Dr. Thresh, in whose laboratory the bacteriological work was carried out.

Dartford.

ACUTE PULMONARY ŒDEMA.

BY LEONARD WILLIAMS, M.D. GLASG., M.R.C.P. LOND.,

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ON Nov. 1st, 1907, a man, aged 50 years, came to the out-patient room of the Metropolitan Hospital to report himself. He had left the hospital a fortnight before, having been an in-patient with aortic regurgitation under the care of Dr. Hugh Thursfield. I examined him on the couch in the side room and found that his heart was enlarged in all directions, that he had a see-saw murmur at the aortic base, tortuous radial arteries, and a systolic blood pressure of 165 millimetres of mercury. There were some very fine moist râles at both pulmonary bases behind. So far from seeming distressed he appeared to be remarkably cheerful and loquacious. Having finished my examination I returned to the main room. Very soon afterwards I heard the patient cry out as if with sudden pain and I immediately went to him. I found him leaning against the side of the couch clutching at his throat; to my inquiry he replied that when he got off the couch he could not "fetch his breath." His face was cyanosed and moist with perspiration; he was very breathless and wore a look of great anxiety. Mr. Kendrew, the junior house physician, then joined me, and we laid the patient on his back and sent for some oxygen. The cyanosis, the dyspnœa, and the anxiety all rapidly increased, but instead of remaining immobile, as in angina pectoris, the patient rolled about, clutched at his throat, shouted out, and shortly became unconscious. A quantity of froth (estimated at rather more than a pint) now began to issue continuously from his mouth and nose. It was not unlike the froth of beer, from which it differed in being finer and thinner. In spite of oxygen inhalation, of strychnine subcutaneously, and artificial respiration he died, well within a quarter of an hour from the commencement of the attack. Death was certainly not due to syncope, for his heart continued to beat strongly after he was apparently suffocated. Owing to difficulties with the relatives the necropsy did not take place until Nov. 4th, that is, three full days after death. The examination revealed no new fact. The heart was enlarged, especially the left ventricle, the aorta, including the aortic valves, was atheromatous, though not very markedly so. The coronary arteries were patent and undegenerated. The lungs, though emphysematous and slightly congested at their bases, were substantially normal. The kidneys were practically unaffected. The brain was normal. What was the cause of death?

For an answer to this question the diligent seeker after truth will appeal to the English text-books in vain. Alone among those which I have consulted, and they are many, Kingston Fowler and Rickman Godlee[1] refer specifically, though briefly, to the subject. Nor are the German writers more helpful. Sticker, the author of an otherwise excellent and exhaustive article in Nothnagel (Specielle Pathologie und Therapie, Band xiv.) on the subject of pulmonary œdema, although he quotes, to condemn it, Cohnheim's saying, "Die Menschen sterben nicht weil sie Lungenödem bekommen, sondern sie bekommen Lungenödem weil sie im Begriffe sind zu sterben," makes no mention of an acute form. It is only the French text-books which throw any light on the question. In vol. i. of the third edition of his "Maladies du Cœur et de l'Aorte," p. 300, Huchard, in a discussion of the matter which extends over several pages, quotes the following from de la Harpe[2] as the description of a typical case of hyperacute œdema of the lungs (*forme suraiguë ou foudroyante*).

Un malade est réveillé en sursaut pendant la nuit. Il saute hors de son lit, traverse la chambre, s'assied sur une chaise, râlant: quelques instants après, il était mort, et une houppe de mousse blanche sortait abondamment de la bouche et des narines.

In the matter of information to be obtained from periodical literature the English reader is more fortunate; for not only is there an excellent lecture by Dr. J. Lindsay Steven of Glasgow, giving the details of two cases, in THE LANCET of Jan. 11th, 1902, p. 73, which evoked an equally interesting and eminently readable paper by Mr. Thomas Lissaman of Bolton-le-Moors in THE LANCET of Feb. 8th of the same year, p. 366, but there is a very instructive article by Dr. H. M. Hewlett in the *Intercolonial Medical Journal* of 1903, and, finally, in the *American Journal of the Medical Sciences* of January, 1907, a most exhaustive review of the whole subject with full bibliography from the pen of Professor David Riesman of Philadelphia. These, however, are not to everyone's hand, and one feels that the gist of the information which they contain ought to be more easily accessible. Having regard to the fact that in France the existence of the condition has been recognised and its meaning discussed, practically since the days of Laennec (1781–1826), and vigorously since Andral wrote on the subject in 1837, it is surely high time that the matter were adequately noticed in the text-books in this country. Of the 44 separate references given by Riesman, 28 are in French, nine are in English, and seven are in German. The silence of our text-books on the subject is remarked upon and deplored by all the English writers, notably by Hewlett, and Riesman pleads strongly in favour of the condition being given a separate place in the standard works.

To return to the case which I have just described. Clinically, there seems to be no doubt that it was a typical example of hyperacute or "foudroyant" pulmonary œdema. The dramatically sudden onset, the lividity, the dyspnœa, the physical and mental distress, the foam issuing from the mouth and nose, and the appallingly rapid termination suffice to place it unmistakeably in the same category as those described by others. It is interesting to note that most of the recorded cases have occurred at night—i.e., when the patient was recumbent, and that mine occurred after the patient had been lying on the couch. This looks as if position might have some connexion with the provoking cause, a suggestion which is borne out by the events which always preceded the attacks in Hewlett's Case 1.[3] My patient had aortic disease. The ascending aorta was atheromatous and the cusps were sufficiently involved to produce during life a see-saw murmur which was unmistakable. He also had tortuous radial arteries. That there is some definite relationship between the occurrence of acute pulmonary œdema and cardio-vascular disorders is a matter upon which most of the writers on the subject are agreed. Huchard goes so far as to say that aortitis and peri-aortitis is the only cause, but from the records of other authors this is evidently far too restricted a view of the matter. Clifford Allbutt[4] lays stress upon the probable coincident responsibility of general arteriosclerosis, and many have associated the condition with that form of arteriosclerosis which is commonly called granular kidney. Moreover, Kingston Fowler and others describe the seizures as occasionally taking place in acute affections such as typhoid fever, in which the cardio-vascular apparatus may be assumed to have been structurally normal. Nevertheless, it seems desirable to emphasise the point that acute pulmonary œdema is one of the ways in which people, especially those suffering from cardio-vascular complaints, may meet with sudden death. The condition may indeed in this respect be held to rank in importance, though not in frequency, with angina pectoris. As in angina pectoris, there may be recurrent attacks; and, as in angina pectoris, the first attack may be the last.

A small proportion only of the recorded cases contain an account of post-mortem findings. In the majority of those which do, the lungs were definitely œdematous, and in some, the trachea and larger tubes were filled with the characteristic froth, which one French writer describes as "une écume d'un blanc pur, semblable à des œufs battus en mousse"[5]; Huchard says that it may be "de coloration rosée, d'apparence saumonée," and Riesman that "it is often

[1] Diseases of the Lungs, Longmans, 1898, p. 281.

[2] Revue Médicale de la Suisse Romande, 1881, p. 322. [3] Page 612.
[4] The Cavendish Lecture, THE LANCET, July 18th, 1903, p. 139.
[5] Quoted by Huchard.

blood-tinged." In my case, though the froth was abundant during the attack, there was no sign of its presence at the necropsy. This may be due to the relatively long period which elapsed between the patient's death and the post-mortem examination; though it is possible that the fluid which was evacuated represented most of what was secreted, and that it was the sudden gush of a comparatively small quantity rather than the continuous secretion of a large amount which suffocated the patient. The only other case which I can find which seems to resemble mine in this particular is one quoted by Riesman as follows: "Jaccoud [6] reports a case of typhoid fever terminating fatally within 15 minutes from acute pulmonary œdema, which he designates as 'un veritable coup de sang pulmonaire.' The autopsy revealed nothing to explain the tragic event."

The age and sex incidence in the cases the records of which are readily accessible afford some features of interest. Of Riesman's six cases only one patient was a male; of Hewlett's four cases all were females; Lissaman's patient was a female; Lindsay Steven had one male and one female; so that of the 14 cases, including my own, only three were males. One of these was 72 years of age, another 50 years, and the third 40 years. With one exception all the women were 38 years of age or over, most of them being past 40 years of age. The one exception is Riesman's Case 2 in which the patient was aged 25 years and was asthmatic. High blood pressure was a notable accompaniment in all Hewlett's cases, a fact which points strongly to the existence in all of them, and therefore in most others, of some organic affection of the arteries.

As to the treatment which is proper to cases of acute pulmonary œdema, there is considerable diversity of opinion. Reisman says that the best results are obtained by venesection and quotes with approbation Merklen's [7] enthusiastic testimony to this line of treatment—"c'est l'unique salut." Hewlett, however, who employed it in one case in which "the cyanosis was intense and the pulse tension high," was disappointed with the result. "It did not relieve the patient at all and she recovered from this attack much more slowly and was weaker than after any of the others." The remedy which he recommends, and in which he expresses great confidence, is the subcutaneous injection of a quarter of a grain of morphine, a measure of which Lindsay Steven disapproves.

Lissaman, who used alcohol, nitro-glycerine, and sedative drugs in vain, was moved to try the effect of the inhalation of small quantities of chloroform. The result was so successful that he discarded all other remedies and both he and his patient learned to place the utmost reliance upon this form of treatment. Against this testimony must be set that of Victor Pedersen [8] of New York who relates a case in which the symptoms developed immediately after, and seemingly as the result of, chloroform anæsthesia. This author speaks highly of extensive and repeated dry-cupping, an expedient in favour of which Riesman also expresses himself strongly.

My own case was treated, quite ineffectually, by orthodox emergency methods. Had I to deal with it again I should act differently. More than once when I was watching the man's agony the possible utility of venesection crossed my mind but I was deterred from having recourse to it by the existence of the pronounced aortic regurgitation to which I had been listening a few minutes before. From what I have seen of the literature on the subject I am disposed to think that this little operation might have saved the patient's life. To what has already been quoted in its favour let me add the note of confidence which is sounded in the following passage: "L'asphyxie est rapide. Pas une minute n'est à perdre. Il faut pratiquer la saignée. ..... La saignée doit être large: 300 à 400 grammes. Le médecin n'hésitera pas. Sans crainte de la syncope, et malgré l'aspect blafard du malade, il tirera la quantité de sang nécessaire." [9] Having regard to the fact that acute œdema of the lung is an accident which may befall a patient at any time, even in our consulting rooms, it is well for us to be prepared with a means of treatment which is so well and positively recommended.

York-street, W.

[6] Clinique de la Pitié, 1883.
[7] La Médecine Moderne. 1903, vol. xiv., p. 145.
[8] Acute Œdema of Lungs, Annals of Surgery, vol. xliii., 1906.
[9] Clinique Thérapeutique, Huchard and Fiessinger (Maloine, 1907), p. 8.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CARCINOMA OF THE OVARY OCCURRING IN A CHILD AGED SEVEN YEARS.

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THE following case I think is worthy of record owing to the unusual age of the patient. There was nothing of importance in the family history or in the past history of the patient.

About Christmas, 1906, the patient first began to complain to her mother of pain in the abdomen. The mother thought the pain was due to indigestion and therefore did not then bring the child for treatment; but at the beginning of February, 1907, the mother first began to notice an enlargement of the abdomen of the child. This increased rapidly and caused the child to be brought to the Bridgwater Hospital on March 16th. The pain which the child had first complained of at Christmas had continued off and on up to the time of admission but was never severe. During the six weeks before admission the mother said there was distinct wasting to be noticed about the limbs and face. At the time of admission to hospital the abdomen was markedly prominent and more so on the right side than the left. Filling the abdomen to within a finger's breadth below the ribs was a firm hard mass with an irregular surface. The irregularities were rounded and smooth and firmer than the rest of the tumour, and one, situated just above and to the left of the pubes, and of about the size of a hen's egg, seemed to have a short pedicle and was moveable to some extent. The larger mass was not moveable. The fingers could not be pressed down into the pelvis below the tumour. The whole tumour was dull on percussion and no thrill could be obtained. The splenic and the liver dulness were normal. Shifting dulness could be obtained in the left flank but not in the right. Per rectum nothing of the tumour could be felt. On March 17th, the day after admission, the patient had a rise of temperature to 102·4° F., accompanied by pain in the abdomen similar to the attacks she had at home, but the pain was more severe. There were no symptoms excepting the pain and tenderness and there were no changes in any of the physical signs. The pain was relieved by hot applications and the temperature fell gradually until it became normal on the 20th. On the 21st it was decided to perform an exploratory laparotomy. The operation was performed by Dr. G. W. H. Bird, assisted by Mr. R. H. F. Routh, and the anæsthetic was administered by me. The abdomen was opened in the middle line two inches above the pubes. Some clear fluid was thus released from the abdominal cavity and the tumour found to be of right pelvic origin. There were extensive old and recent adhesions of the tumour to the great omentum. These were partly separated and partly ligatured off and divided until the tumour could be delivered out of the abdomen. The right Fallopian tube was ligatured off separately and divided. The peritoneum of the pedicle was then divided circularly and ligatured by two unlocked ligatures of silk, the tumour cut away, and an additional ligature put round the whole stump. The abdominal wall was closed in one layer. The patient stood the operation fairly well and made an uninterrupted recovery. She got up on April 11th and went home on the 17th, able to run about like any other child and looking well.

The tumour on examination was found to be solid but very friable and with numerous nodular outgrowths, on the average of about the size of walnuts. It was covered entirely by peritoneum and had occupied the broad ligaments. No ovarian tissue could be found anywhere, neither on macroscopic nor microscopic examination. On section the interior of the tumour was solid excepting at a few spots where there were little pockets of about the size of peas filled with a straw-coloured fluid. The cut surface was yellowish and friable with islands of firmer white tissue scattered here and there. The weight of the tumour was 2 pounds 1 ounce. A portion of the tumour was sent to the Laboratory of

Pathology and Public Health, then at 62, Queen Anne-street, and at first it was reported as an endothelioma (alveolar sarcoma), but subsequent examinations showed it to be of carcinomatous nature.

The patient improved rapidly after the operation and put on flesh. On May 15th the patient was again seen and was apparently perfectly well, and no abnormal physical signs could be detected anywhere. The scar was very firm. But at the end of July she was again seen and was obviously wasting, with signs of recurrence in the abdomen with free fluid.

Earl's Court, S.W.

NOTE ON AN UNUSUAL CASE OF APPENDICITIS.

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THE following case deserves mention as showing how closely the symptoms and course of enteric fever may be simulated by what was primarily an attack of appendicitis.

The patient, a female, aged 11 years, was admitted into Monsall Hospital on Sept. 10th, 1907, having been certified as suffering from enteric fever; this was apparently the eleventh day of disease. The history was that she had been ill for a year with "nervous debility"; this was, however, apparently subacute rheumatism. On August 31st she was attacked suddenly with headache, diarrhœa, abdominal pain, and vomiting; these were followed on Sept. 1st by shivering and sweating. As the diarrhœa continued and the abdomen became slightly distended she was notified for removal to hospital.

On admission I found the usual signs of mitral regurgitation and, in addition, there was some bronchitis with diminished air entry at the base of each lung. The tongue was dry and coated in parallel lines. The temperature was 105° F., the pulse was 140, and the respirations were 40. There was slight but general abdominal distension. Nothing abnormal could be felt in either iliac fossa or in the region of the bladder. Fairly deep palpation was possible without eliciting any tenderness anywhere. The spleen could not be felt. The lower limit of the liver dulness was half an inch above the costal margin in the right nipple line and the costal margin itself in the anterior axillary line. There was no diarrhœa and the stool passed after an enema was dark and partly formed. The Widal reaction gave a negative result. I thought that the patient was probably suffering from a moderately severe attack of enteric fever supervening on subacute rheumatic endocarditis.

On Sept. 12th there was some abdominal pain which was referred to the umbilical region; this was not accompanied by any symptoms of collapse. The respiratory movement was fair; the pulse-rate was 110. The liver dulness was further diminished below by half an inch in the nipple and axillary lines. There was no muscular rigidity and nothing to be felt on deep palpation in the right iliac fossa; there was no tenderness. An ice-bag was applied to the abdomen and the patient was carefully watched. The pain passed off almost immediately but recurred at 6.30 P.M. and again at 11.15 P.M. There was no change in the physical signs but the temperature had fallen from 104° to 101°; the ice-bag was removed. On the 13th there was no more pain but the pulse-rate had risen to 140 and there was some hæmorrhage from the bowel. A definite diagnosis of enteric fever was made. Shortly after mid-day, despite there having been no recurrence of pain, the liver dulness had markedly diminished, though the general abdominal distension had not increased. Perforation of the intestine was suspected and under local anæsthesia with B eucaine lactate and adrenalin solution an incision 1 inch in length was made into the peritoneal cavity at the outer edge of the right rectus. As there was no sign of peritonitis whatever and a presenting coil of intestine was normal in appearance the incision was sewn up in layers; there was no free gas in the abdominal cavity. On the 14th the liver dulness had returned to normal. There was more hæmorrhage from the bowel. The patient seemed slightly better. On the 16th there was evidently increased toxæmia and there was intermittent abdominal pain. The abdomen was soft and the distension had diminished. The patient died on the 19th, apparently from the toxæmia of enteric fever.

Necropsy.—At the post-mortem examination, made shortly after death, there was no sign of enteric fever whatever and no peritonitis in any situation. The condition of the appendix, however, was peculiar: at its proximal end it was apparently normal; the tip was adherent to the cæcum lower down and on slitting the latter open an ulcer of the size of half a crown was seen, having an opening into the appendix at its base. The liver was of normal size and on section was found to be riddled with abscesses of varying size. The patient had obviously suffered from appendicitis in the first instance with pylephlebitis arising by infection from the ulcer in the cæcum. The heart showed the usual signs of chronic mitral disease. The vegetations on the valve were not of recent date. Cultures from the liver gave almost a pure growth of bacillus pyocyaneus.

The interesting points in this case are:—1. The entire absence of any local peritonitis accompanying inflammation of the appendix and of the cæcum. In the absence of this it is difficult to see how a diagnosis of appendicitis could have been made. 2. The entire absence of any hepatic symptoms during life. 3. The closeness with which the toxæmia from the intestinal organisms simulated that of enteric fever. Inasmuch as cultures were not taken during life it is difficult to say whether or not bacillus pyocyaneus was the main factor in this case; judging by analogy from similar cases one would suspect that bacillus coli communis was also concerned.

I should add that the abdominal incision was made in consequence of the difficulty that otherwise existed in determining the absence of perforation. In this case, though the pain was indefinite, the increase in the rapidity of the pulse combined with the loss of liver dulness were taken as an indication for the peritoneal incision, which in itself produced no constitutional disturbance whatever.

Manchester.

NOTE ON A CASE OF RHEUMATIC HYPERPYREXIA IN A CHILD AGED SIX YEARS.[1]

BY G. H. LOCK, M.R.C.S. ENG., L.R.C.P. LOND., D.P.H.

THIS rare and fatal complication of acute rheumatism, hitherto, so far as I can discover, unrecorded in so young a patient, occurred recently in a girl, aged six years, whom I had attended at birth and since whenever she was ill. Her father had worked in compressed-air caissons for years and always successfully passed the periodical medical examinations to which such workers are subjected. Her mother was young and perfectly healthy. A maternal aunt had suffered from rheumatism; otherwise the family history was free from this disease and good in other respects. The child, with the exception of measles followed by whooping-cough, enjoyed good health during infancy. She grew up healthy, of alert intellect, and engaging disposition and manners. A year ago she passed through an attack of chorea which subsided during six weeks' complete rest in bed, and when she was brought to me in January of this year to report progress she was fit and well with the exception of a rough systolic murmur at the cardiac apex. I could not make out that the heart was appreciably enlarged but the murmur was conducted into the axilla. On Sept. 10th of this year she sickened for left lobar pneumonia which, with a temperature ranging between 102° and 103° F. and no uncommon features, terminated by crisis on the fifth day. A day or two after this crisis there was a return of the choreiform movements which at first mild and confined to the left side subsequently became general and severe. On the 20th pain in the left hip was complained of and the temperature rose to 100°. The child was enveloped in cotton-wool and five grains of salicylate of soda in an alkaline mixture were given every four hours. On the next day (the 21st) other joints were involved, the temperature was 101°, and the case was a typical one of acute rheumatism with chorea. The dose of salicylate of soda was doubled. The following day (the 22nd), at 11 A.M., the temperature was 105°. After tepid sponging the nurse reported a drop to 104·5°. Ten grains of salicylate of soda were administered every hour. At 6 P.M. the temperature had risen to 107°. An ice pack was ordered and at 8.30 P.M. the temperature had fallen to 105°. This application of cold was not well borne, alarming cyanosis and embarrassment of respiration followed. The heart distinctly dilated and the sounds were almost inaudible. A drachm of

[1] A paper read before the Society for the Study of Disease in Children on Nov. 15th, 1907.

brandy was given and ordered every hour throughout the night; the salicylate with the addition of three minims of tincture of digitalis was continued. Ice was kept applied to the head and nape of the neck. The next day (the 23rd), at 10 A.M., the temperature was 108°, the pulse was 110, and the respirations were 68. A graduated bath was prepared, but while waiting for a fresh supply of ice and before immersion the temperature in less than an hour rose to 110°. At this moment death occurred somewhat suddenly. An hour after death the temperature was 109°. These temperatures were taken in the rectum by a trained nurse and verified by me. The last observation was kindly confirmed by Mr. S. H. Greene of Kensington.

The onset of this period of abnormal temperature was not associated, as far as the chorea would allow me to observe, with any fresh endo- or peri-carditis. The swelling of the joints was not so marked, but it was impossible to obtain anything from the child as to the degree of pain in them. The pulse though feeble was never greatly hurried but the respirations were very frequent (from 60 to 68) and noisily panting in character. The most marked feature was the complete suppression of sweating. There was a plentiful crop of sudaminal vesicles from former sweats but the skin was quite dry and pungently hot throughout. There was no sleep during the presence of the hyperpyrexia; on the other hand there was no delirium or mania. The child though dazed asked for and knew her mother to the end and the severe choreic movements ceased only with death. I have searched through many writers for mention of this termination of cerebral rheumatism in childhood with negative results. That it must be extremely rare is evidenced by the remarks of Sir W. S. Church in his article on Rheumatism in Allbutt and Rolleston's "System of Medicine" (1906). In writing of hyperpyrexia he states: "Its occurrence in early childhood is as yet unknown" and, further, "no age period if we except early childhood appears exempt." In the same volume Dr. W. B. Cheadle, writing under the heading "Rheumatism in Childhood," states that he has never met with a case of hyperpyrexia. The youngest case of which he can find any record is that of a girl, aged 13 years.

Uxbridge-road, W.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

EPIDEMIOLOGICAL SECTION.

The Present Methods of Combating the Plague.—The Protection of India from Invasion by Plague.

A MEETING of this section was held on Dec. 2nd, Dr. A. NEWSHOLME, being in the chair.

Mr. W. M. HAFFKINE, C.I.E., delivered an address on the Present Methods of Combating the Plague. He said: "The measures suggested for stamping out the plague or for preventing its importation deal (1) with man, (2) with inanimate objects, or (3) with the lower animals. 1. The first category of measures comprises: (*a*) Discovery and notification of persons attacked with the disease; (*b*) isolation of the attacked; (*c*) certain precautions with regard to the disposal of the dead; (*d*) segregation of those who have come in contact with the sick or dead; (*e*) institution of cordons round infected areas; (*f*) a less drastic and less thorough plan than the last mentioned—viz., placing in quarantine arrivals from infected places, detaining the sick and suspected, and letting the rest free after a time of observation; or (*g*) a still less rigorous measure which is merely to examine travellers, isolate the sick and suspected, and let the others free under a system of surveillance. The following propositions are now more or less generally recognised—viz., that plague is what has been termed, in a general sense, a disease of locality; that it is contracted principally at night; and that the part which man plays as direct agent in its propagation is a more or less subordinate one. This being so, the measures taken with regard to man, even when carried to perfection, can influence the propagation of plague only to the same proportionately limited extent. In the vast majority of cases events have conformed with this conclusion, in that precautions taken against the importation or the spread of plague by man have failed to secure the desired end. It must, however, be stated that these precautions can rarely, if ever, be carried to perfection. Their application is fraught with great difficulties and is often impracticable. This is due to the impossibility of enlisting the self-sacrificing coöperation of private individuals, to the first cases being rarely recognised, to the reluctance of those falling ill to deliver themselves into the hands of strangers and officials, to the measures of prevention hurting trade and numerous private interests, and to the consequent wholesale evasion of prescribed rules. The time, therefore, arrives when the measures directed against man are relaxed or dropped and efforts are chiefly applied to inanimate objects. 2. The list of measures within an area infected comprises in this case destruction or disinfection of houses, furniture, clothing, bedding, carriages, goods, warehouses, grain and other stores, garbage, drains, and streets. Outside the infected area the measures consist in the refusal to admit carts, trains, and ships with goods from infected places, or in the refusal to admit only certain goods, or in mere inspection of trains, carts, and ships, and some procedure by which these, and the goods they convey, as well as the belongings of travellers, are sought to be rendered harmless. All these measures are intended for the avoidance or destruction of plague germs which may possibly exist in the objects concerned. Plague bacilli have, however, been very carefully looked for but have not been so far discovered in the earth, on the walls or floors of houses, or on any inanimate object, unless they were quite obviously and recently soiled by the products of a plague patient. I am not, moreover, aware of an instance in which the propagation of this disease to a distance by means of goods of inanimate nature has been conclusively demonstrated, though linen, clothing, handkerchiefs, and other personal belongings of a sufferer from pneumonic plague, if soiled with his sputum or nasal discharge, must be dangerous for a certain period of time. Further, the microbe of plague is not a resistant organism. From the first it was seen that in ordinary circumstances it was easily killed by disinfectants. Exceptional conditions are required for that microbe to resist and preserve its vitality. In these circumstances the following conclusion might seem justifiable: If inanimate objects are important carriers of plague, disinfection should generally be an effective check to its spread, and on this presumption the above measures were devised. According to numerous observations, however, made by health authorities, a house, its furniture, all the belongings of the inmates, and the inmates themselves may be washed and disinfected repeatedly, and yet cases of plague may occur subsequently to each disinfection if people are allowed to stay in that house. Though general statements to this effect have been made by earnest observers, I am not aware of a precise and convincing demonstration by experiment of a case in which disinfection arrested the development of an epidemic of plague. The above theoretical considerations must be qualified by the following remarks. The expense and the difficulties of destroying or thoroughly disinfecting houses, goods, and other property over a vast area are very great and the agency for properly carrying out such measures is not available or is not forthcoming. The enormous bulk of merchandise conveyed nowadays by rail and ship admits of no process which would answer to elementary requirements of disinfection, and the opposition and hostility of vast numbers of people whose interests are interfered with by these measures can only be estimated when the task is actually undertaken. There is, therefore, little wonder if disinfection fails, as has been seen on so many occasions, to interfere with the progress of the plague. 3. I come to the measures relating to the lower animals. These are: (*a*) destruction or keeping away of rats by poisoning, trapping, tar and sulphuric acid mixture, or through the agency of the domestic cat; (*b*) improvements in towns and villages, with a view of reducing the rat population—viz., structural alterations of dwellings, warehouses, and grain stores, demolition of insanitary buildings, introduction or improvement of conservancy arrangements, prompt disposal of garbage, periodical inspection of stores, paving and draining of streets, and certain other measures; (*c*) destruction and dispersion of fleas by petroleum or other products; (*d*) fumigation of houses as a temporary protection against rats and fleas; (*e*) obligation on ships from infected regions to anchor away from the shore, or (*f*) provision of mechanical arrangements for preventing the landing of rats along mooring cables and gangways; and (*g*) fumigation of ships arriving with plague patients or plague rats on

board. The measures have therefore for their object, and I believe rightly so, the rat and the flea, described by Rothschild under the name of *Pulex cheopis*; but spontaneous epidemics of plague break out also among squirrels, tarbagans, guinea-pigs, mice, monkeys, kangaroos in Australia, and some other animals which contribute to keeping the epidemic alive. Measures for the destruction of rats were applied in India at the beginning of the epidemic—viz., in 1896—by Professor W. J. R. Simpson, then health officer of Calcutta, and have since been carried on there in many places. They are now enforced wherever plague makes its appearance, and a new impulse has been given to them by the researches of the recent Plague Commission in Bombay. But nowhere, possibly, has the effect of these measures been more carefully gone into than in Sydney under the direction of Dr. J. Ashburton Thompson. The campaign against rats is the most rational and the best founded of all the measures suggested for stamping out the plague, for in animals alone have plague microbes been actually seen so far in nature outside the animal body, and the efforts to secure protection from rats must command universal approval. In estimating, however, the extent to which this is a promising measure, the following must be taken into consideration. Various factors, such as increase of the human population, destruction or planting of forests, occupation of waste lands, building of canals, introduction of new animals and plants, and a variety of other circumstances bring about in the course of time important changes in the flora and fauna around us. I might quote, as relatively modern instances, the disappearance of wolves from Great Britain, or the practical extinction of the bison or of the black rat from these islands and the continent of Europe, and a few others. These changes have taken place gradually and in such long periods of time that the exact causes which have brought them about are unknown. Up to quite recently it would have been impossible to name a single instance of a result of this kind having been effected in a short time by steps of an administrative character or even by the resolve of a whole population. From time immemorial man has had to put up with the presence in his proximity of animals and plants interfering with, and devastating, his crops—locusts, field mice, spermophiles, campagnols, phylloxera, mildew, rabbits in Australia, and so on. The power of adaptation and reproduction with which nature has endowed many of these animals and plants generally triumphs over the deliberate efforts of man when the surrounding circumstances are favourable to their multiplication. Still the problem is not wholly impossible. The recent successful instances are the campaigns against mosquitoes in Ismailia, in Klang and Port Swettenham, in the Panama Canal zone, and a certain number of other places at which it has been found possible to alter in a short time the surrounding conditions so as to render the propagation of these insects impossible. These examples are a grand and splendid lesson to the world, but a lesson which, it must be acknowledged, is in many cases difficult and in others impossible of imitation. The observations made by Dr. Ashburton Thompson, the Chief Medical Officer of New South Wales, are of interest in this connexion. I have in view his carefully organised campaign against rats in Sydney, with the object of protecting from plague a white population of a high standard of intelligence and education. During that campaign Dr. Ashburton Thompson found that the gross returns of rats and mice caught and destroyed in Sydney week by week were nearly uniform; that there was thus no evidence that the slaughter produced such an impression on the general horde as would have rendered collection progressively more difficult; and that there was no ground for inferring that any material impression had been made on the total rat population. The opinion he came to was that extermination of rats in any large area by poisoning and trapping was practically impossible and that the plan of spreading among them an artificial epizootic by means of Dr. Danysz's rat virus did not succeed on account of that virus losing rapidly its virulence. On this latter point one cannot forget that India has now had in the plague bacillus 11 years' experience of a most devastating virus for these animals, and as yet there is no sign that this involuntary experiment has rid the country of their presence. The observations coming from Japan, where determined efforts have been made to destroy rats, are as little encouraging. The facts published in June of last year were to the effect that in Tokyo alone 4,800,000 of these animals had been killed, but the slaughter seemed only to have prepared more favourable conditions for the multiplication of the survivors. Dr. Ashburton Thompson's experience in regard to facilities given by householders in Sydney for the detection of plague rats was identical with that gained in India. He found that the people were reluctant to admit to their premises rat-catchers and other strangers bent on that task, and that the information supplied by the inhabitants, as well as that gathered by the professional men specially appointed for the purpose, was so scant as to be barely sufficient to indicate the presence of infection in a locality but not to gauge its severity. Though, therefore, the measures against rats, either by extermination or by change in the construction of cities and villages, are a most important item in an anti-plague campaign, the question whether any noticeable impression can be made on the epidemic by these measures within the length of a generation or even in a longer period is a matter of great uncertainty. Even the destruction of rats on ships alone, if imposed as a general measure, would cause a dislocation of traffic and an outcry formidable to face. The result is that every day plague is imported, though fortunately it does not spread, into one part or other of the maritime countries of the world." Mr. Haffkine here turned to the question of prevention. He said: "The plan of abandoning the affected locality for shorter or longer periods may perhaps be termed a *second stage* in a campaign against the plague. To whatever extent that plan is feasible, to that extent the effect of it is beneficial. It is the limited range of it and the innumerable complications which it brings in its train that finally lead the administration and the people to resort to what I always viewed as the *ultimate method* of combating the bubonic plague in the areas in which it becomes endemic—viz., that of conferring on the population immunity from the disease by means of an artificial treatment. It would be out of place here to enter into the bacteriological aspect of the anti-plague inoculation, to examine the various views from which the subject might be approached and solved, and the advantages and difficulties presented by each. For the purposes of the present deliberations it may, perhaps, be sufficient to enumerate the salient points of the matter, as ascertained in India in the last 10 years. These are: (1) That in a native of that country, who is more susceptible to the disease than Africans, Europeans, and some other races, the inoculation now in force in India reduces the liability to attack to less than one-third of what it is in a non-inoculated Indian; (2) that in the one-third of cases which still occur, the recovery-rate is at least double that in the non-inoculated attacked, the ultimate result being a reduction of the plague mortality by some 85 per cent. of what it is in non-inoculated Indians; (3) that in an inoculated European an attack of plague, if it subsequently occurs, has, as far as is known to me, always ended in recovery; (4) that the inoculation is applicable to persons already infected and incubating the plague, and prevents the appearance of symptoms, or else mitigates the attack, a fact which disclosed a basis for the bacterio-therapeutic treatment of disease; (5) that in natives of India the degree of immunity conferred by this inoculation, though gradually vanishing, seems to last during several outbreaks of plague; and that (6) in Europeans the effect has not yet been seen to disappear in the space of time, since 1897, that this inoculation has been under study." Mr. Haffkine then briefly discussed the epidemiological aspect of the question and the place which experience has indicated should be assigned to this plan of defence in plague-stricken provinces. He said that His Majesty's letter on the plague, addressed to the Governor-General of India on August 13th last, and Lord Minto's communication to the heads of local governments and administrations, had brought about a renewal of effort for bringing down the plague mortality and that fresh campaigns had been undertaken and organised in the light of the teaching gained during the past decade. He added, quoting the official utterances of Mr. Muir Mackenzie, the Acting Governor of the Presidency, that the province which had had most of this unhappy experience was the Bombay Presidency where the disease appeared first—viz., in 1896—and where Sir George Sydenham Clarke, who took over office as Governor of Bombay a few weeks ago, had now addressed to the vernacular newspapers a letter emphasising the heavy responsibility which rested upon the newspapers of using their influence with the natives to prevent the spread of the scourge. Sir G. S. Clarke acknowledged that if the

people were unwilling to destroy the rats which were the vehicles of the disease, their feelings must be respected, and he therefore urged that recourse should be had to universal inoculation which, he stated, was the easiest and most certain method of prevention. Mr. Haffkine pointed out that the experience gained in the Punjab, the other great province of India attacked by the plague, had been stated in a memorandum which the local government addressed to the Government of India on June 30th, 1902, after five years of the application of various anti-plague measures. He continued: "According to this statement *segregation of patients and contacts* under the conditions which are essential to the success of that measure is entirely out of the question and intercourse between infected and uninfected places is in most cases quite unrestricted; *evacuation* is not a measure which can be of assistance in checking the extension of plague from one locality to another; *disinfection* cannot be relied upon as a practical measure for the check of the epidemic; and there remains only *inoculation* with the plague prophylactic, and its benefits, the Government says, are so generally understood in the Punjab that a large proportion of the population of the infected districts can without much difficulty be induced to submit to the operation. The resolution issued by the Government on the subject ends by saying that the Lieutenant-Governor 'earnestly appeals to everyone interested in preventing the manhood of the country from being sapped and its vitality destroyed by the scourge of plague and particularly to the leaders of native society and non-official Europeans who employ labour on a considerable scale, to aid in the endeavour to induce the people to protect themselves by inoculation.' Subsequently to this resolution the Government of the United Provinces issued orders offering also facilities for those who wish to vacate their houses and giving detailed and well-thought-out directions for the destruction of rats. Mr. President and gentlemen, I have endeavoured to place before you the present position of the various measures suggested and tried so far in combating the plague as an epidemic. I have not entered upon the subject of curative treatment of plague, because this would perhaps be outside the scope of this section, and because the result of that treatment leaves much, if not everything, to be desired."

Dr. ASHBURTON THOMPSON followed with a paper on the Protection of India from Invasion by Plague. He said: "Selection of this topic for discussion by a stranger to India requires justification. I point out, therefore, first, that Australian conditions happened to be so favourable to the epidemiological investigation of plague that data of two classes were there acquired with comparative ease—viz., (*a*) fundamental data which concerned the disease itself and which consequently hold good in all countries, in all circumstances; and (*b*) data which concerned practical administration, which are liable to modification in different countries by local habits. And then, secondly, I would say that I have no intention of trespassing on the province of the administrator, at least in the details of his work. I propose to speak rather of the statesman and to point out that which I conceive to be the sole and irrefragible principle which he must impress on administrative staffs if he would achieve any permanent reduction in the susceptibility to invasion by plague which is so marked a feature of the conditions of life in India. The fundamental data acquired at Sydney were the following. 1. The epidemic spread of plague occurs independently of communication of the infection from the sick; consequently the infection of plague spread by means which are external to man and which are independent of his agency as subject of the disease. The data on which this conclusion is founded were first published in November, 1900. 2. The plague rat is harmless to man; it is, nevertheless, the essential cause of epidemics; consequently some intermediate agent is necessary to convey the infection in efficient form from rat to man. The evidence for this conclusion was first published in July, 1903. 3. The intermediate agent between rat and man (and between rat and rat) can be no other than the flea foreshadowed by Simond and, further, actually is the flea. This conclusion also was published in July, 1903, together with the exact observations made in the field from which it was deduced. The administrative data then acquired were many. They were all referable to the fundamental data, and when it appeared, as it sometimes did, that the conclusions of this class were not in accordance with experience in other parts of the world, it was still found that the differences were apparent and not real, and were easily explicable by the fundamental data already mentioned. For the sake of example the following instances may be cited. One of them was that transfer of the sick to hospital is a very important curative measure, but is quite without importance as a preventive measure. Another was that there is no such thing as infection of localities or places, although the disease is acquired by resort to certain localities; the explanation is that the local rats are infected, not the places themselves. A third was that clothing never becomes infected with plague and is never a cause of spread, and it was easily seen that the contrary experience commonly recorded in India was not inconsistent with that conclusion but was explained by the fundamental datum that the infection is communicated by fleas which in India very much more commonly infest the people and their houses than in Australia where such infestation is for the most part absent. Observations of the class now referred to may or may not hold good in all respects in changed social conditions, but there was another among them which has not yet been mentioned and which is certainly of universal applicability; this was that the infection of man was most usually contingent on his being within buildings together with plague rats, and on considering the fundamental data it became evident that a certain proximity between man and the minute agent of his infection—the flea—must be necessary. Hence it appeared plainly that the exclusion of rats from occupied buildings must be an important item among steps for the prevention of plague, for from the rat alone does the flea derive its power. But, more than that, the longer this point was contemplated the clearer it became that the rendering of occupied buildings rat-proof was absolutely the most important item in plague prevention and even the only one to which the epithet "preventive" could be justly applied. The reasons will be referred to presently; here I would merely note that I advocated this view also first in 1900 and then predicted that its simplicity and perhaps also its apparent indirectness would militate against its acceptance by the laity who control the purse and consequently the means of carrying it out. And it is still the case that attention is concentrated on other measures which, in reality, are merely remedial, or merely palliative, and which are consequently interminable. This, then, is the point to which I wish to draw special attention; but I must add that I take it to include and to cover destruction of the harbourage which rats find outside, and in the immediate neighbourhood of, buildings. The difficulty of saving the people in a place from attack is proportioned to any difficulty there may be in preventing the access of rats to the buildings occupied by them; but the difficulty of clearing plague away from the place itself is proportioned to any difficulty there may be in removing the harbourage which rats find in the mouths of sewers, in heaps of lumber and rubbish, in loose earth and rubble-fillings, and in dilapidated sheds or the like structures. It should be noted that the administrator who is faced with an outbreak of plague is perfectly right in relying on immunisation of the people—a possibility laid open to him by the genius of Mr. Haffkine, here present,—on evacuation, and on the destruction of rats. These are his only, and fortunately his very effective, means of staying it. But the statesman should be caused to understand that the control of existing epidemics is not a subject to engage his supreme abilities and that his preoccupation should be how best to diminish the susceptibility to invasion of his country as a whole. The methods just mentioned (I must repeat it) are in fact remedial, not preventive, and consequently they are, as I have already remarked, interminable. If a population be immunised this year, it must, if it be reinvaded, be again immunised in a twelvemonth, or a little later; evacuation may have to be repeated even during the same season and to the killing of rats there is literally no end at all. But every building which is rendered inaccessible to rats may be regarded as a fortress impregnable to that enemy for ever. This, then, indicates the only road the statesman can fitly take—a road, namely, on which every step must be directly towards the goal and on which there cannot be any backsliding. The arrest of present outbreaks is a quite different matter from diminution of the liability of the country to suffer them. Removal of the conditions which constitute susceptibility can alone be justly spoken of as preventive action. And it is, I think, of little use to place scientific truths before the laity unless the expert points out their practical bearing and application at the same time. In order to judge in how far true that is, it is only necessary to ponder the

Gazette Extraordinary which was published by the Government of India during August of this year. That Gazette draws attention to the essential part played by the rat, to the essential agency of the flea, and to the insignificance of deposited infection; but it also expresses the opinion that this knowledge, acquired by it from the remarkably brilliant reports of the Plague Research Committee, will probably not render the task of prevention much easier than it was before. The Gazette even mentions the desirability of excluding rats from dwellings, but only to dismiss this method with the remark that it is impossible to expect much improvement in the construction of buildings in the near future. The all-important distinction mentioned above between remedial and preventive measures is not perceived. This pronouncement, then, appears to be rather less far-seeing than might reasonably have been expected. For there are many other considerations which must be entertained besides the crude facts which are recited in the Gazette. It should be noticed that plague seems to have taken its place among the endemic diseases, and if the uncertain teachings of history seem to offer some prospect of its ultimate extinction by natural process it should be borne in mind that present circumstances are vastly different from those which formerly obtained, and especially in relation to traffic. To-day plague is a disease to be fought persistently in India, as, I suppose, typhoid fever and cholera are there fought. No speedy exemption is, in my opinion, to be expected. It must be frankly said that the method of exclusion is practically impossible in the smaller villages, in the larger villages, and in the lesser towns, but this admission is very far indeed from covering the whole case. In the first place, it is precisely in those smaller and more or less circumscribed collections of huts and houses that the palliative or remedial measures are easily successful and, provided the infection be not re-introduced, permanently successful. In the second place, whence do Indian villages derive their infection? Is it not from the great cities on the seaboard, and from the larger inland cities which have become secondary distributing centres? And is it indeed quite impossible to apply the method of exclusion in them? I do not doubt that when a broad and comprehensive survey of all the data has been taken it will be perceived that the exclusion of rats from occupied buildings in cities is the only measure which can permanently diminish the susceptibility of India to plague, and that as soon as this principle of action has been grasped resolutions taken by Government will be conceived in the spirit which animated that courtier who, when he was desired to undertake a business which the king himself thought it hardly possible to carry through, replied, "Sire, if it be difficult, it is already done; if it be impossible, it shall be done!"

THERAPEUTICAL AND PHARMACOLOGICAL SECTION.

Therapeutics of Indigestion.—Tropical Diseases and their Treatment.

A MEETING of this section was held in the Apothecaries Hall on Nov. 26th.

Dr. WILLIAM MURRAY in an interesting paper opened a discussion upon the Therapeutics of Indigestion. He specially emphasised the importance of diet and clothing and from a wide personal experience discussed the utility of various drugs. In suitable cases he had seen the greatest benefit from the use of cerium oxalate, of bismuth, of chloroform, or of the strong nitro-hydrochloric acid.—In the discussion which followed, and which turned for the most part upon the question of the relative digestibility of different forms of fat, Dr. SOPER, Dr. R. C. B. WALL, and Dr. FRENCH took part.

Mr. JAMES CANTLIE then read a paper upon Tropical Diseases and their Treatment. During the last few years attention had been directed especially to the study of protozoa, and increasing knowledge had taught us that the majority of tropical diseases were due to them rather than to bacteria. Mr. Cantlie showed some beautiful lantern slides illustrating phases in the life-histories of the malarial parasite, of certain filariæ, of the guinea-worm, and of certain trypanosomes. He discussed especially the treatment of the various ailments associated with the presence of these parasites. The protozoa were especially affected by metals—the protozoon of syphilis by mercury, of malaria by arsenic, and of sleeping sickness, as Plimmer has shown, by antimony. In malaria quinine was likely to lose its power and might well be reinforced by arsenic.—Dr. J. G. DUNCANSON, Dr. MABEN, and Professor A. R. CUSHNY joined in the discussion which followed.

ODONTOLOGICAL SECTION.

Growth of the Jaws.—Chronic Suppuration in the Pulp of a Molar of a Horse.

A meeting of this section was held on Nov. 25th, Mr. J. HOWARD MUMMERY, the President, being in the chair.

Mr. JAMES T. CARTER read a paper entitled "Some Notes on the Growth of the Jaws," in which he referred to the recent work done regarding the studies of ossification of the mandible, maxilla, and premaxilla. He also dealt with the growth of the bones after birth and pointed out the existence of a so-called intermaxillary antrum in the skull of a chimpanzee. The changes in the maxilla and premaxilla consequent on expansion of the maxillary sinus were briefly described, as also were those changes in the mandible which were correlated with, but secondary to, those of the maxilla.—A discussion on the paper followed, Mr. F. J. BENNETT, Mr. H. BALDWIN, Mr. NORMAN G. BENNETT, and Mr. J. F. COLYER taking part.

A short communication on Some Effects of Chronic Suppuration in the Pulp of a Molar of a Horse was given by Mr. H. WATSON TURNER in the absence of the author, Mr. J. G. TURNER.

MEDICAL SOCIETY OF LONDON.

The Relation between Sciatica and Hip-joint Disease.—Intussusception in Children.

A MEETING of this society was held on Nov. 25th, Dr. J. KINGSTON FOWLER, the President, being in the chair.

Dr. W. IRONSIDE BRUCE read a paper on the Relation between Sciatica and Hip-joint Disease. He said that the clinical evidence in support of the view that the origin of the pain in sciatica was in the hip-joint was very thoroughly discussed three years ago by Dr. William Bruce in an address on the real nature and rational treatment of this disease published in THE LANCET of August 22nd, 1903. That theory, probable as it was, could not be expected to destroy immediately the time-honoured belief that sciatica was a neuritis. It could be readily understood that without pathological evidence, which in those cases was so difficult to obtain, most physicians would hesitate to accept the new proposition. In order to obtain such evidence, with a view to demonstrating the truth or otherwise of the contention, he had taken from time to time as opportunity offered radiographs of the hip-joint in cases of sciatica. In most of the cases offering typical symptoms of sciatica he had found demonstrable changes in the joint. It must be remembered, however, that the x ray shadow of the head of the femur and acetabulum being in profile a radiograph would only show changes in the outline if those changes were present at the upper or lower aspects of the joint. Changes in the anterior or posterior aspects of the joint, if not extending to the upper or lower parts, would therefore not be recognised by that method of examination. In early cases, also, when the changes were confined to some inflammatory thickening in the synovial membrane or to slight deposits of calcareous material or uric acid salts, the alteration in the structure of the joint might be so slight that a radiograph would not clearly demonstrate it. Thus a certain number of cases submitted to examination (early cases of arthritis or those cases in which the alterations in the structure of the joint were slight) would not offer clear evidence of an arthritis, which was still, however, present. He drew their attention to the cases of sciatica which he had collected and in which he had discovered an associated arthritis of the corresponding hip-joint. He had had the opportunity of examining 12 cases presenting typical symptoms of sciatica, and of those he had selected five in which there was no difficulty in observing by radiography the articular changes which had taken place. It was admitted that tuberculous disease of the hip-joint was frequently associated with pain referred to—that is, felt—over the internal aspect of the knee-joint and in the knee-joint itself, the explanation of that being that the obturator nerve, which supplied the ligamentum teres and the capsule of the hip-joint, also supplied branches to the knee-joint and to the skin over the inside of the knee. It must be possible for hip-joint disease other than tuberculous to initiate referred or sympathetic pains which

would be felt elsewhere. He maintained that diseases in that joint, such as gout or arthritis deformans, might be the starting point of pains that could be present almost anywhere on the surface area of the affected limb and thus gave rise to conditions which were recognised as "sciatica" and treated accordingly. One of the most constant signs in cases of sciatica was wasting of the muscles of the gluteal region. The gluteal muscles were not supplied by the sciatic nerve and if that disease was a neuritis of the sciatic nerve and nothing else why should those muscles waste? He might also point to the want of evidence of a genuine neuritis in the sciatic nerve, to the absence of electrical reaction of degeneration in the muscles, to the admittedly close relation between sciatica and the gouty and rheumatic diathesis, to the lameness present, and to the fact that the most successful treatment of the condition was absolute rest, which of necessity involved rest of the hip-joint itself. If the disease were a neuritis why should that nerve, which was so well protected in its anatomical position by the muscles and tissues of the thigh, be so frequently attacked in comparison with such a nerve as the ulnar? He did not wish it to be thought that he was making the assertion that all cases of chronic arthritis were associated with sciatica. Chronic arthritis of the hip-joint was a condition well known and quite frequently met with; it would, however, be much more frequently recognised in its early stages were it not for the deep-seated position of the joint and the difficulty of applying the ordinary methods of examination in it. Many cases of sciatica after many years of suffering on the part of the patient became quite chronic in their nature and when changes in the hip-joint became obvious, and still more so when ankylosis had been established, the case was removed from the category of sciatica and was set down as the so-called rheumatoid arthritis. In conclusion, he thought it might be fairly stated that if systematic examination of the hip-joint by the x rays in intractable cases of sciatica were carried out it would be found in many cases that the sciatica was present as a symptom only of an arthritis of the hip-joint.—In the discussion on this paper the PRESIDENT said that the skiagrams shown by Dr. Bruce proved that in certain cases diagnosed as sciatica there were changes in the hip-joint.—Dr. F. DE HAVILLAND HALL referred to the fact that sciatica more often occurred on the left side than on the right.—Dr. R FORTESCUE FOX thought that Dr. Bruce's paper would help them very much in the future.—Dr. C. W. CHAPMAN described two attacks of sciatica from which he had suffered.—Dr. SYDNEY P. PHILLIPS laid stress on the importance of recognising that there were two classes of sciatica, one in which there were wasting and anæsthesia and another in which there was paroxysmal pain.—Sir J. F. H. BROADBENT agreed that the distinction between sciatica and disease of the hip-joint was of importance.—Dr. F. J. POYNTON said that before it could be held that Dr. Bruce had proved his point the condition of the lower part of the vertebral column in the cases quoted should be definitely ascertained.—Dr. A. F. VOELCKER remarked that it would be of interest to the members of the society to hear the subsequent clinical history of Dr. Bruce's cases.—After Mr. C. GORDON WATSON had spoken Dr. BRUCE replied.

Dr. D. C. L. FITZWILLIAMS read a paper on the Pathology and Etiology of Intussusception in Children. He said that his paper gave the result of his investigation of over 1000 cases. From arguments based on seasonal incidence, on age, and on sex, he suggested that the dietetic factor might play a more important part in the causation of intussusception than was generally admitted to be the case. The seasonal influence of the disease was marked and of more interest than would be expected. A curve made from 453 cases not older than one year, according to the months of the year in which the intussusceptions occurred, showed a fall during the first two months and then a sudden rise in March, in which month the numbers reached their maximum; from April to September the fall was gradual and persistent, October and November each showed a slight rise, while during December the curve showed that the figures nearly doubled those of the previous month and almost equalled those of March. The most remarkable fact about that curve was that there was a steady fall in the number of cases during those months in the summer and early autumn when the intestinal disorders of infants were most rampant. The rise during the month of December was, he thought, connected with the dietary peculiar to Christmas time as more cases occurred during the last than during the first half of the month. Easter falling either in March or April might be considered closely associated with the maximum rise of the curve. At those two periods of the year the older children, and even grown-up members of the family, were accustomed to take a larger amount of sweets and indigestible foods than at other times, and a misguided sense of kindness allowed the infant to obtain a share of the tit-bits which were wholly unsuited to him and to which he had not been accustomed. Dealing with the influence they found that as the child's age varied so also did the liability to suffer from intussusception. The relation of age to the incidence of the disease was remarkable and constant. In 648 cases under the age of 13 years, 466, or 71·9 per cent., occurred in children who were not more than 12 months old; 143, or 20·5 per cent., between the ages of one and six years; and only 39, or 6 per cent., between seven and 12 years of age. The period between the fourth and the seventh months of life inclusive was the time at which intussusception was most likely to occur; of the 466 cases under one year, no less than 64 per cent. fell within that period of four months. The appearance of the first teeth at that time was often taken by the parents as an indication that the child was old enough to assimilate a more varied diet than heretofore and many articles of food quite unsuited to the age were forced upon the infant. In 788 cases of all ages in which the sex was noted 536, or 68 per cent., were males, while 252, or 32 per cent., were females. That disproportion between the two sexes became still better marked in children under 12 years of age, the ratio between males and females being as 3 is to 1. All statistics of cases of intussusception drew attention to the preponderance of the males but as yet no explanation had been brought forward. He did not wish to press the point but suggested that the sex incidence rather favoured a dietetic origin of the affection; male children being larger and stronger were given more food than those of the opposite sex. It was a matter of interest from the point of view of the possibility of a too generous diet being responsible for the production of the condition, to note that intussusceptions occurred almost without exception in fat, well-developed, and healthy children. In the records of the Hospital for Sick Children there was no exception to that rule. In reading the cases in the literature one was struck by the same fact; indeed, it had been noted by many observers and must, he thought, correspond with the experience of all surgeons. In Germany, where breast feeding was far more general and more strictly carried out than in this country, intussusceptions in infants were relatively rare. If statistics could be obtained from those who were well enough off to employ a trustworthy nurse to attend to the feeding of the infant even if he was not fed on the breast, he was sure that the proportion of cases would be found to be far less than among the hospital class of people, who although they fed the child mainly on the breast were too ignorant to know that pieces of steak, herrings, apples, or crusts were not suitable articles of diet for small infants—all those substances having to his knowledge been given just prior to the onset of the symptoms in children treated at the Hospital for Sick Children, Great Ormond-street. He felt convinced that if the mothers were really carefully questioned on that point many would give a history of the child having had some unusual substance by the mouth, such as some indigestible form of food, an altered diet, or some purgative. The age incidence, the effect of the seasons, and to a lesser extent the disproportion between the sexes, all seemed to point to a dietetic rather than to an anatomical causation of the disease.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

Psychology of Crime.

A MEETING of this association was held on Nov. 19th at the rooms of the Medical Society of London, Dr. P. W. MACDONALD, the President, being in the chair.

The PRESIDENT made sympathetic reference to the death of Mr. G. H. Urmson, a Commissioner in Lunacy, paying a high tribute to his memory. It was resolved to send to his widow an expression of deep condolence. Reference was also made to the illness of Mr. G. W. Mould, late of Cheadle Asylum, and satisfaction was expressed at the recent honour

conferred on Sir Thomas Clifford Allbutt, formerly a Commissioner in Lunacy.

Dr. ALBERT WILSON, who at the last meeting read an illuminating paper on the Psychology of Crime and showed persons illustrating different types of mental abnormality, on this occasion introduced a discussion on the subject by a recapitulation of his main contentions and showing further cases.

Dr. C. A. MERCIER defined a criminal as a person whom the community punished because he did something of which the community did not approve, though that something need not be anything intrinsically wrong—i.e., a failure to attend church on Sundays and saints' days was not now regarded as against the law, though at one time it was. It was quite wrong to regard the criminal class as a class within the community but not of it. It was sometimes taught that criminals were recognisable on inspection, but some of those shown might from appearances have passed muster as members of a learned profession. Professor Lombroso spoke of departures from the average but it would be difficult to define the average type and still more to find persons who conformed to it in every particular. It was a heresy to regard crime as necessarily insanity. The criminal was the product partly of instinct and desire and partly of opportunity. He feared very few people would resist temptation if the temptation were sufficiently strong. To believe that the criminal was marked off from the remainder of the race was to weaken the sense of responsibility which it was the duty of the citizen to foster both in himself and in others. The outstanding features of lunatics were loss of control and readiness to yield to temptation.

Sir RALPH LITLER, K.C., while agreeing that the medical profession had the greatest opportunities for good in connexion with the subject under discussion, said that many members of the legal profession felt a deep interest in it also. As chairman of quarter sessions he had often to decide what to do with a person who was known to the medical man as a "sport," and for whom they could not help feeling pity, even though his conduct might have been brutal. Many cases which came before the courts were on the borderline between sanity and insanity and on that line which separated a knowledge of right from wrong. He hoped some method of detention would be found which was less expensive than a lunatic asylum. Many who were criminally minded were prevented from committing crime for fear of the consequences. He was strongly opposed to the system of short sentences of imprisonment. In Birmingham 80 or 90 boys were in one year sent to prison for a nominal period of three days, which really meant one night in prison—the surest way of training them to become criminals. It was small wonder that they soon returned to prison. Alcohol, instead of being a cause of degradation, was in many instances a result of it, the cause being squalid homes and generally unsatisfactory surroundings. Sir Ralph Litler spoke with much satisfaction of the work being done by the Borstal Association, and quoted the remarks of Judge Willis, its chairman, in its annual report. He also deprecated early and improvident marriages. A man who, through successive trials, proved himself incapable of being trusted, should be kept in custody, though kindly treated. The mental condition of prisoners should be carefully inquired into but the matter of the utmost urgency was to see that the people had decent homes.

Mr. ARNOLD WHITE contended that there were two kinds of restraint: first, the restraint of the nobler life which people could live, and secondly, that which was imposed by the State. Dr. Wilson's paper grappled with the question of how to bring about that self-control which made good citizens and he regretted that the discussion had travelled outside that line. There was nothing more pathetic and intractable than dealing with people who had lost the power to resist impulse and desire. He dwelt on the physical and mental unfitness of a considerable proportion of the community and asked whether there was not some way of escape in the direction indicated by Dr. Wilson.

Dr. JAMES SCOTT said that he did not quite agree with Dr. Mercier's definition. Criminals interfered with the law and therefore a comprehensive term would be law-breaker; many law-breakers would not like to be called criminals; for instance, the conscientious objector sent to prison. Criminals were very difficult to deal with and he suggested that they should be separated into professional and others. The man who lived by crime was not a lunatic; he was in possession of his faculties, and if he showed that he belonged to that class he should be restrained indefinitely. In the other class there was more room for the work of the psychologist. The great influences were faulty environment and heredity and such cases could not be got hold of early enough to correct them. He concluded by a reference to the new law which will come into force on Jan. 1st, 1908, the Probationary Offenders Act, which enabled first offenders to be liberated on parole and intrusted to the superintendence of a trustee. He hoped it would be a great success and that the officers appointed under that would have as much success as the Salvation Army officers had.

Mr. ELIOTT HOWARD, as a magistrate, expressed his sympathy with the objects of the new Act and said that he would delay administering punishment but if it were administered it should be deterrent. He would administer corporal punishment up to the age of 18 years and for those over that age he regretted the parish stocks were done away with. There should be some form of punishment for those older, such as the wife-beater, which would be very salutary and to be feared.

Dr. M. E. PAUL contended that the subject was so wide and far-reaching that it was difficult to keep the discussion within certain limits. He believed that when a man had become a hardened criminal there was very little more to be done with him; yet he did not underrate the importance of the extraordinary specimens who had appeared at the meeting. He questioned whether that result could be brought about on a large scale. Hope lay only in a large alteration of the conditions which at the present day produced criminals. It seemed absurd to contend that there was no such thing as inherited disposition to crime. Younger prisoners could be done much with under the Borstal system.

Mr. J. CARSWELL (Glasgow) said that the question was as large as the whole social problem. He likened the efforts of the Salvation Army to getting people on to a moving platform, but there was danger that the real defects might be hidden. In actual work they so frequently found such persons falling away again. And many weak-minded persons who were said to have passed a certain standard at the special schools were found on test to be far below that. There was a class of incorrigibles who, though not insane, were marked off from the rest of the community.

Meeting of Scottish Division.

A meeting of the Scottish division of this association was held in the hall of the Royal College of Physicians at Edinburgh on Nov. 22nd, Dr. DAVID YELLOWLEES being in the chair.

Dr. YELLOWLEES drew attention to the fact that since last meeting Dr. James Rutherford had retired from the post of medical superintendent of the Crichton Royal Institution, Dumfries, and he thought that such an event could not pass without the association recognising the great services that Dr. Rutherford had rendered in the interest of lunacy. He said that Dr. Rutherford was one of the oldest members of the association and moved that it be recorded in the minutes that the members learned with heartfelt regret that illness was the cause of Dr. Rutherford's resignation, but hoped his retirement from active asylum service would be the means of restoring him to good health.

Dr. J. CARLYLE JOHNSTONE, in seconding the motion which was unanimously adopted by the meeting, paid high eulogy to the well-known administrative work of Dr. Rutherford and his unceasing activity in all that concerned the welfare and humane treatment of the insane.

Dr. R. M. MARSHALL read a paper on Mental Symptoms with Brain Tumour.

Dr. W. W. IRELAND gave a short account of the International Congress of Neurology held last September in Amsterdam and to which he was a delegate of the association. He spoke in warm terms regarding the manner in which the members of the association were received by the Dutch. The only objection he had to the work of the congress was that it was conducted in three divisions—viz., those of Psychology, Psychiatry, and the Care and Nursing of the Insane. As the business of each of the three divisions frequently took place at the same time and was of great practical interest it was impossible that one could attend to the several sections. He also intimated that the International Congress of 1908 would be held at Vienna.

PATHOLOGICAL SOCIETY OF MANCHESTER.—A meeting of this society was held on Nov. 13th, Dr. J. J. Cox, the President, being in the chair.—Dr. R. B. Wild read a paper upon the Relation of Scar Tissue to the Etiology of

Malignant Growths. 14 cases were briefly described, of which ten were on scars of lupus vulgaris, two on scars of burns, one of scald, and one on the scar left by repeated blistering for neuralgia. The cases were illustrated by photographs and microscopical slides and showed multiple lesions in many cases. All the growths were squamous epitheliomata, the glands were not involved, and where post-mortem examinations were obtained visceral deposits were absent. Three possible modes of origin were noted: (1) Trauma or mechanical irritation of an old scar; (2) pus infection of the scar and development of a growth at the inflammatory focus; and (3) irritation of the scar by the x rays during treatment for lupus vulgaris. The structure of scar tissue was discussed and sections were shown and it was pointed out that the simple structure of scar tissue afforded a means of studying the development of epithelioma without the complicating influence of glands and other constituents of normal skin. Epithelial overgrowth seemed to be the result of local irritation—mechanical, chemical, bacterial, or due to etherial vibrations. The hypertrophied epithelium might form a papilloma or thickened patch or invade the deeper tissues if the resisting power of the connective tissue was weakened. In a scar the connective tissue had only a feeble resisting power and probably the senile factor in the etiology of epithelioma was more a want of vitality in the senile connective tissue, and hence a lessened resisting power to epithelial penetration than any senile change in the proliferating epithelial cells. Finally, the tendency of the connective-tissue element of a scar to occasional overgrowth was referred to and keloid of scars was compared to, and contrasted with, epithelioma. In both cases there was a loss of balance between the two constituents of the scar tissue and an overgrowth of one of them.—Dr. F. Craven Moore read a paper on Cholesterin. After briefly referring to the most important chemical and physical characteristics of the cholesterin group of substances and their wide distribution in organic nature, he dealt with some of the results of his own investigations on the relations of cholesterin in the human organism. Using the melting point and the specific rotation as criteria it was possible to establish the identity of the cholesterin extracted from a number of different tissues and fluids. By simple methods of extraction and fractionation it was found in all the cases that the whole of the cholesterin could be extracted in an uncombined form and that saponification gave no further yield. In normal tissues it was observed that the cholesterin was invariably associated with a lecithin or allied body but the evidence so far obtained indicated that the association was physical rather than chemical. Of interest as throwing some light on the origin of cholesterin as a pathological product was the fact that no increase of cholesterin occurred when normal spleen and some other tissues were allowed to undergo bacterial putrefaction or aseptic autolysis. In an anæmic infarct of the spleen the percentage of cholesterin was less than in the normal organ. Referring to the excretion of cholesterin by the bowel, the investigation of normal human fæces (one case) failed to yield the substance koprosterin and after the administration of 5 grammes of cholesterin to a healthy subject it was found that it was excreted unchanged. In a case of complete obstruction of the common bile-duct cholesterin could not be obtained from the fæces in recognisable quantity.—Dr. Cameron and Dr. W. Mair showed and described a specimen of Spina Bifida and Hydrocephalus presenting some unusual abnormalities. The vertebral arches from the second lumbar downwards were deficient; the first lumbar vertebra showed a bony outgrowth from the back of the body which, uniting posteriorly with the laminæ, divided the spinal canal into two parts. The cord and its membranes became double at the same level and the two cords thus formed were incorporated with the wall of the sac.—Mr. J. E. Platt showed and described a Fibroma of the Anterior Abdominal Wall.—Other specimens were shown as card specimens.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held at the Royal Infirmary on Nov. 19th, Dr. T. J. Wood, Vice-President, being in the chair.—Dr. F. W. Eurich gave a microscopical demonstration and showed two cases of Thoracic Aortic Aneurysm and a case of Chronic Myelitis.—Mr. J. Basil Hall read a paper on Some Facts about Gastro-jejunostomy with a record of 60 consecutive cases. He pointed out that this record dated back to the early days of the operation and included many operations which he had performed at a period when their knowledge of the method was very imperfect. The mortality of 11·5 per cent., therefore, could not be taken as any guide in estimating the risk at the present day, and in support of this he mentioned that he had only lost one case during the last three years and that was due to pneumonia in an alcoholic patient. In 13 cases in which the operation was performed for malignant disease a degree of relief had been obtained which was quite unattainable without surgical interference. These patients had lived an average of seven months in comfort subsequently to operation. In all the cases there was either definite pyloric obstruction or marked signs of gastric stasis. He urged that symptoms of pyloric obstruction constituted a definite indication for surgical interference, whether such symptoms were believed to be due to malignant disease or otherwise. Of the non-malignant cases he had been able to follow the subsequent history of the patients in 39 instances. In 36 cases the operation had proved eminently successful except that in two of them a second laparotomy had been necessary on account of an adhesion of the gut. In both of these the anterior operation had been performed. Two of the patients had subsequently borne children. In two cases laparotomy for perforated ulcer had been previously performed, the gastro-jejunostomy being undertaken in one case for pyloric stenosis and in the other for pain and hæmatemesis. Of the remaining three cases one did exceedingly well for two years when death occurred from a perforating jejunal ulcer. In this case the anterior operation had been performed. Two cases had been more or less failures in that some gastric symptoms had continued after operation. In one of these the anterior operation had been performed and there was not much doubt that the discomfort and sensation of distension which occurred after food were due to adhesions round the efferent coil. The other case was an extreme example of long-standing gastric ulceration associated with wide-spread adhesions, and although the patient still suffered from gastric attacks her condition was a great improvement upon that prior to operation. Of the 39 non-malignant cases there were 13 with pyloric obstruction, 11 cases of duodenal ulcer, and 12 cases of chronic gastric ulcer, the last named including three examples of hour-glass stomach. In three cases no ulcer was found, although marked gastric symptoms had existed for two years in each case. The results in these cases had been excellent. It was interesting to note that in none of them was there the immediate relief which usually follows the operation, but a gradual amelioration of symptoms extending over six or seven weeks and ending in permanent cure. Such a course seemed very suggestive in view of the recent observations which had been made on the effect of gastro-enterostomy upon the gastric acidity.—Dr. A. F. Martin read a few notes on an unusual case of Meningitis.

ÆSCULAPIAN SOCIETY.—A meeting of this society was held at the Metropolitan Hospital on Nov. 29th. Dr. W. Langdon Brown, the President, showed: 1. A man, aged 53 years, suffering from Tabes Dorsalis presenting some rather unusual signs. He had had syphilis 35 years ago and 20 years later had an attack of left-sided paralysis from which he had a certain amount of recovery. He had absolute Rombergism, profound ataxia, and very marked analgesia, but he had brisk knee-jerks, especially on the left side, and well-marked supinator jerk. He had markedly unequal pupils, but they were paralysed for light as well as for accommodation. He had loss of emotional expression but retention of voluntary facial movements, so that in addition to tabes dorsalis he had probably a syphilitic endarteritis in the neighbourhood of the optic thalamus and the beginning of the crus (cerebri). 2. A child, aged three and a half years, with Chronic Pneumonia following whooping-cough. There had been signs of consolidation of the right base which had extended all over that side. There was extreme swinging of the temperature from 98° to 104° F., which suggested empyema, but exploring with the needle in several places gave no result. The child remained ill and septic-looking and the chest was then extensively explored for a possible interlobular empyema but this was not found, the two lobes being stuck close together. The child was expected to die but unaccountably recovered, the temperature dropping and the bronchial breathing and bronchophony disappearing. The beneficial effect was probably due to the operation breaking down adhesions, releasing the lung, and allowing it to expand properly. 3. A well-marked case of Stokes-Adams Syndrome. During the attacks the arterial pulse at the wrist was 20 per minute, while the

venous pulse in the neck was 100. An x ray examination of the heart showed that the auricular beat was 32 during the time the ventricular beat was nine. It was an undoubted case of heart block due to degeneration of the auriculo-ventricular muscular bundle of His. Strychnine afforded marked benefit.—Mr. Peter L. Daniel showed a man with an extreme degree of Osteo-arthritis. The phalanges of the fingers and toes were deformed and stumped and the x rays showed rarefaction and absorption of bone. He had marked septic gingivitis, so disease was due to absorption of poison from the whole gastro-intestinal tract. Mr. Daniel also showed several pathological specimens.—Mr. C. Gordon Watson showed: 1. A woman who three years ago had her appendix removed for severe pain in the right side. The appendix proved to be healthy and the pain was not relieved. One month ago the x rays showed a stone impacted in the right ureter, and the cystoscope and separator showed that no urine was coming from the right ureter and bimanually a stone could be felt. An oxalate stone of the size of a bean was removed. 2. A man who had his tibia wired for recurrent fracture of the tibia and fibula. Mr. Watson also showed several pathological specimens.—Dr. Leonard L. B. Williams showed: 1. A woman, aged 30 years, suffering from Graves's Disease, who had been markedly improved by taking ovarian extract. 2. A lad, aged 16 years, who probably had a Patent Ductus Arteriosus. 3. A typical case of Disseminated Sclerosis in a woman, aged 38 years.

EDINBURGH ROYAL MEDICAL SOCIETY.—A meeting of this society was held on Nov. 22nd, when Dr. G. H. R. Gibson read his Presidential address, taking Premature Burial as his subject.—Dr. S. Forrest showed a typical case of Athetosis in a blacksmith, aged 24 years, who had suffered from partial hemiplegia for 18 years and had developed marked athetosis in his right hand.—Mr. J. G. Greenfield read a paper on three cases of Disease of the Colon, two of them being cancer of the sigmoid flexure successfully treated by resection by Mr. F. M. Caird. The other one was an anomalous case in which a tumour had been felt externally but nothing abnormal was found when the abdomen was opened.

Reviews and Notices of Books.

Hygiene of Nerves and Mind in Health and Disease. By AUGUST FOREL, M.D. Translated from the German for the Progressive Science Series, by AUSTIN AIKINS, Ph.D. London: John Murray. 1907. Pp. 343. Price 6s. net.

MANY of our readers are acquainted with Dr. T. S. Clouston's "Hygiene of the Mind," and the work under review is a similarly successful combination of a popularly written and yet scientifically accurate text-book on the Hygiene of the Nervous System.

In his introduction Dr. Forel states that "nerve hygiene, especially on its social side, has a profound influence upon the mechanism of our human social life. Without a rational nerve hygiene there can be no healthy social development." The book is divided into three parts. In Part I. the author discusses the Mind and Brain in Normal Condition. A useful epitome of normal psychology is given in the first chapter and the anatomy and physiology of the nervous system are considered. In Part II. Dr. Forel describes the Pathology of the Nervous Life. The various mental and other nervous diseases are referred to. Most of this section of the book is too concentrated for the general public; it forms a useful summary for the medical student. The chapter on the Causes of Mental and Nervous Disturbances is concise, practical, and of absorbing interest. The author calls attention to the part played by alcohol in the production of nervous disease and writes with so much vigour in his denunciation of alcohol "in moderation" that we fear he may lead the public, the majority of whom are moderate drinkers, to place less confidence than they otherwise would in the excellent advice contained in the succeeding chapters of the book. In Part III. various methods of rational nerve hygiene are considered. The author has original views on the education of children and protests against the modern system of educating the memory chiefly, the intellect moderately, and the character little if at all. "The aim of every school should be to develop the understanding, the feelings, and the will harmoniously and wisely, so far as each individual brain is capable of such development." Several schools are described which are attempting to carry out this ideal—Abbotsholme in England, Ilsenberg in Germany, Haubinda in Thuringia, and Glarisegg in Switzerland. Dr. Forel has visited these schools and can vouch for the superior results obtained by this system of education. He contends that if social, moral, and sexual teaching is withheld from the young we cannot expect to have high social, moral, or sex ideals in the community. In the chapter on adult hygiene practical advice is given on the necessity of broadening the mental horizon of those who work in narrow grooves and by contrasting the contented with the peevish in different states of life the author demonstrates that happiness is not dependent upon this or that occupation, marriage, money, or other finite factors, but on the individual's ideal in life. A spirit "stunted by the lack of an ideal end in life" cannot attain happiness. Dr. Forel speaks sanely and wisely from the standpoint of a physician who sees the beauty of a balanced mind. His physiological study of mankind has led him to the same conclusion as did the philosophical study of the late Principal Caird—namely, that to satisfy the infinite in man finite ends cannot avail. For true happiness man must lose self and "work for an ideal end."

Text-book of Psychiatry. By Dr. E. MENDEL, Berlin. Authorised translation by Dr. WILLIAM C. KRAUSS, Buffalo, New York. Philadelphia: F. A. Davis Company. 1907. Pp. 311. Price $2 00 net.

THIS book is an English translation of Professor Mendel's "Text-book of Psychiatry," and the translator, Dr. William C. Krauss, writes in his preface that although "some licence has naturally been taken in the translation it has been with the thought uppermost of rendering faithfully Professor Mendel's lucidity of style, while adapting it to the rules of English construction." He has omitted the Prussian procedures relating to the insane and has substituted the New York State laws and commitment form; also he states that the chapters on degeneracy and heredity have been materially enlarged. The author, whilst recognising that there is no lack of excellent German works on psychiatry, is aware that many of these have been deemed too comprehensive for the student attending clinics and in consequence he has written this book in the hope that it will enable the student to fill up the gaps which the clinic must necessarily leave. The book is divided into two parts, the first portion dealing with general psychiatry, under which heading he describes general symptomatology, the etiology of mental diseases, the outbreak, course, duration, and result of psychoses, the pathological anatomy of mental diseases, the diagnosis, the prognosis of mental diseases, and general treatment. The early pages are devoted to a study of hallucinations. The author briefly refers to the various theories that have been enunciated as to their origin and he endeavours to trace hallucinations through their various stages of development; disorders of thought and judgment are similarly treated. When dealing with the disturbances of consciousness the author writes: "The physiological, periodically recurrent diminution of the power of the mental processes of consciousness, which may reach to its complete loss, as in unconsciousness (sleep without dreams), is sleep which presents very probably a physiological auto-intoxication of the brain." If this were true the maniac ought to sleep, whereas of all persons he is the most sleepless. The stigmata of degeneration are well described

and the descriptions are aided by some excellent plates illustrating the various matters referred to. The etiology of mental diseases is not a strong feature in the book, neither is there anything new in the matter of treatment.

The second part of the volume is devoted to the study of the various types of mental disorder. Idiotism is dealt with somewhat briefly and then the author passes on to the description of the "functional psychoses." His account of "delirium hallucinatorium" is very good and the differential diagnosis concerning it is excellent. The account of mania is not so illuminating, for Professor Mendel confines himself to describing various stages or degrees of mental excitement without sufficiently emphasising that a state of excitement is common to many types of mental disorder and is rather a symptom than a definite entity. Again, the description that he gives of paranoia would seen likely to be somewhat confusing to the student, as the various sub-divisions of the disorder would appear to be unnecessarily numerous. There is a good account of paralytic dementia but the statement which the author makes that "Babinski's reflex is often found on one or both sides" in patients suffering from this disease is somewhat opposed to the observations made by other writers. At the end of the book there is a useful supplement which contains a guide for the examination of one mentally diseased and for the preparation of clinical history. This guide is an exceedingly good one and should prove valuable to the student.

The book is supplied with an extensive index, a detail in which so many text-books are deficient. Professor Mendel is a well-known authority on psychological medicine and Dr. Krauss is to be congratulated on having made it possible for the English and American students to read this writer's work.

Modern Methods for Securing Surgical Asepsis. By EDWARD HARRISON, M.A., M.D. Cantab., F.R.C.S. Eng., Honorary Surgeon to the Hull Royal Infirmary. London: A. Brown and Sons. 1907. Pp. vi.–125.

THIS book is a careful and elaborate summary of the technique necessary to secure complete surgical asepsis as carried out in a well-equipped hospital. The author further suggests useful modifications for operating in private houses and he makes some valuable observations about the lack of provision of surgical hospitals for the paying class of patients. It is undoubtedly, as he says, a fact that the pauper has as a rule a better surgical environment for his operation than has an ordinary well-to-do private patient. There are very sensible remarks upon sterilisation and a summary is given of the recent striking work of von Mikulicz and others on the induction of artificial leucocytosis by injections of nucleic acid as a prophylaxis against perforative peritonitis. The various steps necessary in the preparation of the different parts of the body are well given. The routine use of gloves in both operation and dressing is insisted upon and the author says "it is imperative that the operator and assistant should wear masks." This is somewhat discordant with the remark on a previous page that a moustache "may be worn with advantage" to serve as a mask. The book throughout shows some carelessness of construction and we have noticed several errors of spelling which we are constrained to consider typographical, although one occurs in two places. Thus on p. 34 is "Innoculation" and on pp. 54 and 69 we read of parts being put "on the streach." On p. 54 the navel is called "umbelicus" and on the next page "umbelious." On the same page a swab is to be "squeesed" over the skin and we read also of "course and dirty skins." It may be that this page missed being read in proof but the printer cannot be held responsible for such a phrase as occurs on p. 31. "To those who operate frequently, however, the repeated scrubbing, which to be effective must be vigorous ..... in many people causes sores to form on the fingers and so thus defeats its own end." On p. 30, in describing the ordinary method of sterilising the hands, the author mentions the employment of a nail-brush but says nothing about the use of soap. The book is illustrated by half-tone reproductions of good photographs but those facing pp. 16, 20, 28, and 82 appear to us to be totally unnecessary. Some useful printed slips are inclosed in the copy of the book which we are reviewing giving plain directions to the nurse for preparation of patient and room for operation in a private house and also a tabular statement of the duties of surgeon, assistant, and nurse at the operation.

LIBRARY TABLE.

A Handbook of Skin Diseases and their Treatment. By ARTHUR WHITFIELD, M.D. Lond., F.R.C.P. Lond., Professor of Dermatology at King's College; Physician to the Skin Departments, King's College and the Great Northern Central Hospitals. London: Edward Arnold. 1907. Pp. 320. Price 8*s.* 6*d.* net.—There are many excellent treatises on the diseases of the skin but nearly all of them are too large, too elaborate for the average practitioner or student, and therefore we welcome the appearance of this little book which seems to us to be suited exactly to the needs of all who do not aspire to specialise in dermatology. It contains all that should be known by every medical man and the author has carefully excluded the greater number of those debatable points which are especially numerous in diseases of the skin. He has also refrained from burdening the student with more than are necessary of the many synonyms which tend so much to render difficult the study of dermatology. As is well known, the author has devoted much attention to the histology of the subject and we find here some excellent reproductions of microphotographs which should prove of much assistance to the student. There are in all 50 illustrations and nearly everyone shows well the condition which it is intended to represent. It is unnecessary to criticise in detail a work such as this intended for learners, for as a whole it is excellent, but we may perhaps note that it would have been as well to mention in the account of the etiology of lichen urticatus that Mr. Jonathan Hutchinson considers that all the cases so named are caused by the bites of fleas and other similar parasites.

A Text-book of Genito-Urinary Diseases, including Functional Sexual Disorders in Man. By Dr. LEOPOLD CASPAR, Professor in the University of Berlin. Translated and edited, with additions, by CHARLES W. BONNEY, B.L., M.D., Assistant Demonstrator of Anatomy, Jefferson Medical College; Surgeon to the Southern Dispensary, Philadelphia. With 213 illustrations and 23 full-page plates, of which seven are in colours. London: Rebman, Limited. 1906. Pp. 618. Price 26*s.* net.—The name of Professor Caspar is sufficient in itself to guarantee the high quality of any work dealing with the branch of surgery with which his name is associated. The original German edition of this work is known all over the world as a standard treatise on genito-urinary affections but the lack of an English version has retarded its appreciation by those who are unable to read German. Dr. Bonney has done well to translate it into English, for thus it will reach a wider medical public. We may say at once that the translation has been well done, so that it reads almost as an original work. The translator's additions are judicious and they are shown by being included in crotchets, so that they are readily recognisable. Most of the illustrations have been added by the translator and many of them are useful adjuncts to the text. We have found very few errors; we may mention some. On p. 50 is given the formula of a lubricating material for catheters; in it 20 grammes are said to equal 5½ fluid ounces, while 100 grammes are said to equal 3 drachms. Of course, the symbols for ounces and drachms have become

exchanged. In the explanation of the diagram on p. 84 a hair follicle is said to be represented but only a hair is to be seen. It is a pity to use such an expression as "psoriasis of the urethral mucous membrane" when merely some thickened epithelium is present; the expression is clumsy and meaningless. We can speak very favourably of Caspar's treatise in its English dress; it should prove useful to many.

New Inventions.

A RUBBING STROP.

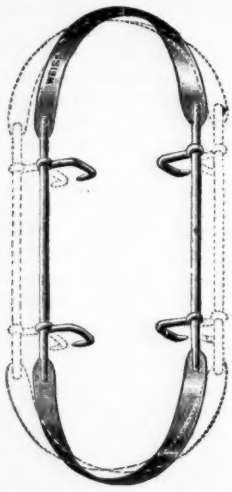
THIS strop, which is made of doeskin, will, I think, be found useful to patients who have to apply liniments with friction to their shoulders and back. I have personally found it answer very well in bronchial mischief affecting the

base of the lungs, and I should think it would be serviceable in lumbago. It has been made at my suggestion by Mr. Staniforth, Church-street, Cardiff, and I believe the cost is 3*s*. 6*d*.

Cardiff. T. GARRETT HORDER.

A NEW FORM OF RETRACTOR.

I HAVE designed the retractor illustrated in the accompanying figure more especially to insure an adequate retraction of wounds when assistance is limited. The instrument is, I think, particularly suitable for abdominal work, but I have found it of service in operations on various other regions. It consists of two light steel bars carrying retracting hooks and connected at either extremity by a



powerful flat steel spring. It has the advantage of being simple, light, easily manipulated, and of securing an adequate exposure while lying entirely out of the field of operation. The three sizes comprising the set have been graduated to be suitable for most operations. The retractor has been manufactured for me by Messrs. Weiss and Sons.

H. TYRRELL GRAY.

Hospital for Sick Children, Great Ormond-street, W.C.

A NEW ASEPTIC FUNNEL DOUCHE.

THE figure shows the form of a new aseptic funnel douche which I have designed and recently shown at the Gynæcological and Obstetrical Section of the Royal Society of Medicine. The advantages of the new douche are as follows. It can be easily cleaned and made aseptic. There is no india-rubber about it to perish; it is durable, being made entirely of metal. It can be easily used by the patient herself in a sitting as well as in a lying position. It can be carried in the ordinary-sized bag. It acts well as a vaginal or a uterine

douche and any quantity of the douching liquid can be used. It is made in metal, nickel-plated, and is supplied by Messrs. Arnold and Sons, of West Smithfield, London.

Ivydale-road, Nunhead, S.E. ROBERT WISE, M.D. Edin.

NEW FORM OF HYPODERMIC SYRINGE.

WE have received from Messrs. S. Maw, Son and Sons of 7 to 12, Aldersgate-street, London, E.C., three samples of a new form of hypodermic syringe which are well worth notice. This type of syringe is called by the manufacturers the "Accosson" hypodermic syringe and three different models are made of it. Of the three samples sent to us

No. 1 is the "Accosson" all-glass syringe, the special feature of which is the glass plug which is so constructed that the needle is coned into the bore of the plug, thus doing away with the delicate glass nozzle over which the needle usually fits. By fitting the needle in this manner there is very little surface exposed to pressure when the syringe is in use and it is therefore almost impossible for the needle to leak or blow off; the price is 6*s*. 9*d*. No. 2 is the "Accosson" syringe of similar pattern to No. 1, but fitted with a special "sterilite" plug instead of the glass plug; an "Accosson" coned needle fits accurately into the plug and again no leakage is possible. The price is 5*s*. No. 3 is the "Accosson" glass and metal syringe fitted with a "sterilite" expanding plunger. This, the manufacturers claim, is the only perfect expanding plunger on the market. Certainly it will not stick, and whether dry or wet is always ready for use. The price is 3*s*. 9*d*. "Sterilite" plugs and plungers are not in any way affected by boiling and can thus be rendered perfectly aseptic, and no drugs used for hypodermic injections have any effect upon them. The syringes are of English manufacture throughout and the glass used in their manufacture is best English hard flint. The coned needles and the "sterilite" plugs and plungers are valuable modifications of the accepted pattern of hypodermic syringe.

THE DUDLEY GUEST HOSPITAL.—The annual report presented to the trustees of and subscribers to the above hospital shows increased work with very successful results, increased economy, and increased receipts. The increased support will be particularly welcome inasmuch as in the previous year an adverse balance had to be recorded. During the year the average daily number of beds occupied was 71. The average stay of the cases was 26¼ days. The average cost per bed was £53 7*s*. and the average cost per patient £4 6*s*. 6*d*. In the eye department the average stay was 18 days and the average cost was £3 7*s*. 11*d*.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

WEDNESDAY, NOV. 27TH.

THE Council resumed its sittings on Wednesday, Nov. 27th, Dr. DONALD MACALISTER, the President, being in the chair. The business transacted was the consideration of

The Penal Cases.

The first case was that of John Sandilands, registered as M.B., Mast. Surg. 1888, M.D. 1894, Univ. Glasg., of the United Free Church of Scotland Mission, Bhandara, Central Provinces, India, who had been summoned to appear before the Council to answer the following charge:—

That you unlawfully caused miscarriage to an orphan girl under your charge, of which offence you were on the 25th day of March, 1905, and subsequently on appeal on the 10th day of July, 1905, convicted at Bhandara, Central Provinces, India, and that in relation thereto you have been guilty of infamous conduct in a professional respect.

Dr. Sandilands did not appear nor was he represented.

The SOLICITOR (Mr. Winterbotham) read the charge and gave details regarding the conviction.

The Council deliberated on the case *in camerâ*.

The PRESIDENT, in announcing the decision, said: The Council having heard the case of John Sandilands adjudge him guilty of infamous conduct in a professional respect and have directed the Registrar to erase from the Register the name of John Sandilands.

The next case to come before the Council was that of Edward John Havens, the consideration of which had been adjourned from May. Mr. Havens is registered as of East Donyland, Colchester, Mem. R. Coll. Surg. Eng. 1879, Lic. Soc. Apoth. Lond. 1879, and he had been summoned to appear before the Council on the following charges:—

That you were on the 5th day of November, 1906, convicted of the following misdemeanour at Thorp Petty Sessions, Thorp-le-Stoken, Essex, namely, of obstructing the highway; also that you were on the 17th day of December, 1906, convicted at the like Session of disorderly behaviour whilst drunk; and also that you were on the 8th day of April, 1907, convicted of the following misdemeanour at Mistley Petty Session, namely, of common assault.

At the conclusion of the proceedings on May 29th, 1907, the President, addressing Mr. Havens, said:—

The Council have deliberated carefully on the convictions which have been proved against you, but they have adjourned the further consideration of your case till the November session, when you should be present to hear the result of their final deliberations.

The SOLICITOR submitted a statement that no complaints had been made against Mr. Havens since May.

Mr. HAVENS made a personal statement to the Council, in which he repudiated the accuracy of reports which attributed eccentric conduct to him. He had not been in practice for 12 or 15 years, but he did not wish to be precluded from practising if he desired to do so.

The PRESIDENT, after the Council had deliberated *in camerâ*, said: Mr. Havens, the Council having further considered the convictions proved against you, does not see fit to direct the Registrar to remove your name from the Medical Register.

The Council then proceeded to hear the case of William Shaw, registered as of Larne, Co. Antrim, Lic. R. Coll. Phys. Edin. 1886, Lic. R. Coll. Surg. Edin. 1886, who had been summoned to appear before the Council to answer the following charges:—

That you were on the 27th day of November, 1906, convicted of the following misdemeanour at Larne Town Court, namely, of being guilty while drunk of riotous and disorderly behaviour; and on the 25th day of June, 1907, of the following misdemeanour at Larne Petty Sessions, namely, of being found on licensed premises on Sunday in contravention of the provisions of the Licensing Acts; and on the 13th day of August, 1907, at Larne Town Court aforesaid, of the following misdemeanour, namely, of being guilty while drunk of riotous and disorderly behaviour.

Mr. SHAW appeared and was accompanied by his legal adviser, Mr. W. M. Wodehouse.

Mr. WODEHOUSE, in addressing the Council on behalf of Mr. Shaw, said that the latter did not dispute the convictions against him. What he did submit was that the cases had been very much exaggerated and when the real facts concerning them were known their trivial nature would be appreciated. The first case had arisen out of an altercation with a former patient on a question of an account. He was only summoned after the event. He might say here that Mr. Shaw was a very ardent politician and the result had been that there was a good deal of strong feeling on the part of the opposite party. Mr. Shaw was a strong Protestant. In the second case he was in reality visiting the publican in his professional capacity. He told the same story to the magistrate who asked where the publican was who was to give evidence on the point. The court adjourned for a short time and the witness was sent for, but he was out. Mr. Shaw was asked whether he should have an adjournment for a week or have the case settled at once. Mr. Shaw said, "Finish it at once," and as it was but a trivial matter the fine was only half a crown. The third case arose out of a political discussion. The gentleman with whom Mr. Shaw was having the discussion was a strong Catholic and he (Mr. Shaw) was a strong Protestant. The altercation was continued in the street and Mr. Shaw thought nothing more about it until a fortnight afterwards—three days before the court met—he was summoned to attend before the court for obstructing the highway. Unfortunately he treated the summons with contempt and the result was that he was fined 5*s*. Mr. Shaw wished him to give these explanations to the Council. He wished further to urge upon them the solid virtues of the man. He had many testimonials from people of all shades of opinion and of different positions in society in the district to testify to the worth of Mr. Shaw. Having read those testimonials he asked the Council to deal leniently with the case.

Mr. SHAW gave personal evidence in support of this statement.

After consideration *in camerâ*, the PRESIDENT announced the decision of the Council in the following terms:—Mr. Shaw, the Council have considered the convictions proved against you, but they do not see fit to ask the Registrar to erase your name from the Register.

The next case which was considered was that of Duncan Shaw Morrison, registered as of Invergowrie, Perthshire, M.B., Mast. Surg. 1891, Univ. Edin., who had been summoned to appear before the Council on the following charge:—

That you were on the 24th day of September, 1906, convicted of the following crime or offence at Lochgilphead Police Court, namely, of breach of the peace; and on the 11th day of February, 1907, at the same court, of the same crime or offence; and on the 18th day of September, 1907, at the same court, of the following crime or offence, namely, of a contravention of Section 70 of the Licensing (Scotland) Act, 1903.

The solicitor handed in the certificates of the convictions.

Dr. Morrison did not appear but a letter was read from him saying that he did not look on the offence of breach of the peace as a crime as it had nothing to do with work in a professional respect. He was sorry for the offence referred to and apologised to the General Medical Council if it considered it a professional offence.

The Council having deliberated *in camerâ*, the PRESIDENT announced its decision as follows:—I have to announce that the Council have adjourned the further consideration of the convictions reported against Dr. Shaw Morrison until May next, when he will be required to appear before the Council and satisfy them as to his conduct in the interval.

The Council then took up consideration of the cases of John P. Rafter, registered as of 338, Stanley-road, Bootle, Liverpool, Lic. Apoth. Hall, Dub. 1882; Lic. K.Q. Coll. Phys. Irel. 1886; Lic., Lic. Midwif. 1892, R. Coll. Surg. Irel.; and John Spencer-Daniell, registered as of the Metropolitan Hospital, Kingsland-road, London, N.E., M.B., Bac. Surg. 1906, Univ. Edin., who had been summoned to appear before the Council on the following charge:—

That you have systematically sought to attract patients in Great Crosby and Waterloo, Lancashire, by the distribution of cards from house to house and in the street, and that in relation thereto you have been guilty of infamous conduct in a professional respect.

Dr. A. G. Bateman appeared for the complainants, the Medical Defence Union. Mr. Smith, solicitor, Liverpool, appeared on behalf of Mr. Rafter. Dr. Spencer-Daniell was present but he was not legally represented.

Dr. BATEMAN said that the cards were distributed by two men and a boy not only to various houses but also in the streets. The cards were printed as follows: "Drs. Rafter and Spencer-Daniell, surgeons, Crosby Village." He read the depositions of various persons who had received the cards and some correspondence which he had had with Mr. Rafter and Dr. Spencer-Daniell on the matter.

Mr. SMITH stated that Mr. Rafter had been in practice in Bootle for upwards of 25 years, so that there was very little

necessity for him to advertise himself. He entered into partnership with Dr. Spencer-Daniell, who was to take the management of the surgery at Crosby village. In order to introduce Dr. Spencer-Daniell to Mr. Rafter's patients it was decided that the cards should be printed and handed to the patients when they visited the surgery. About this time Mr. Rafter was contesting a municipal election and apparently the cards connected with this election were allowed somehow to get mixed up with the visiting cards. The visiting cards were sent by Mr. Rafter to Dr. Spencer-Daniell at the Crosby surgery and Mr. Rafter knew nothing more about them until complaint was made that they were being distributed. Means were taken to stop the distribution as it was entirely against Mr. Rafter's wish that the cards should be distributed.

Mr. RAFTER gave evidence bearing out this statement and added that he never authorised anyone to be engaged to distribute these cards.

Mr. FREDERICK JACKSON, dispenser to Mr. Rafter, said he took the visiting cards to the surgery at Crosby and left them there for Dr. Spencer-Daniell. He engaged men to distribute Mr. Rafter's election literature but he did not know who distributed the cards.

Dr. JOHN SPENCER-DANIELL in evidence stated that he had no knowledge of the distribution of the cards in question. With regard to the allegation that he paid a man for the distribution of the cards, the fact was that when he removed to Crosby he was recommended to a man to do the work connected with the removal. This man appeared to be very straightforward and at the conclusion of his work he stated that Mr. Rafter owed him a pound for the distribution of election cards. Wishing to stand well with persons in the neighbourhood he paid at once. He knew nothing of the distribution of the cards to which Dr. Bateman had taken exception.

After deliberation *in camerâ*,

The PRESIDENT said: Mr. Rafter, I have to announce to you that the facts alleged against you in the notice of inquiry have been proved to the satisfaction of the Council, but they have postponed the further consideration of those facts until the next session of the Council to be held in the month of May. They will ask you to attend at that meeting and to give evidence of your professional character and conduct in the interval. Dr. Spencer-Daniell, the Council have given consideration to the facts alleged against you and they have come to this conclusion, that the facts alleged against you have not been proved to the satisfaction of the Council and in your case the matter is at an end.

The last case for the day was that of Joseph Fitzgerald, formerly registered as of 59, Red Rock-street, Liverpool, but now as of Beach-buildings, Queenstown, Co. Cork, Lic. R. Coll. Surg. Irel. 1871, Lic. R. Coll. Phys. Irel. 1873. He was summoned to appear before the Council on the following charge:—

(1) That you have acted as cover to an unqualified person, namely, Mr. Hamilton Williams Jolly, and knowingly enabled him to attend and treat patients and otherwise to engage in medical practice as if the said Hamilton Williams Jolly were a duly qualified and registered medical practitioner; and (2) that you knowingly allowed the said Hamilton Williams Jolly to fill up and sign in your name certificates of death and vaccination, and in particular, the following certificates of death, namely, of Richard Valentine Patton, Elizabeth Smith, Catherine O'Neill, James Davies, Thomas Charles Cannell, and Frederick Cannell, all in November or December, 1905, and that you signed a certificate of the death of Jessie Gogarty in June, 1907, whereas, in fact, you had not attended or seen the patients in any one of these cases, but the said Hamilton Williams Jolly had alone attended and seen them.

Mr. Fitzgerald did not appear nor was he represented by counsel.

After the usual deliberations *in camerâ*,

The PRESIDENT said: The Council have adjudged Joseph Fitzgerald to have been guilty of infamous conduct in a professional respect and have directed the registrar to erase from the Register the name of Joseph Fitzgerald.

The Council then adjourned until Thursday.

THURSDAY, NOV. 28TH.

The Council resumed its sittings to-day, Dr. MACALISTER, the President, being in the chair.

Penal Cases.

The Council continued the hearing of penal cases and were occupied the whole of Thursday and part of Friday, the 29th, with a case in respect of which a rule *nisi* has been granted by the King's Bench division for writs of prohibition and mandamus and therefore pending these proceedings we do not report anything in regard to the case in question.

FRIDAY, NOV. 29TH.

The Council resumed its sittings to-day, Dr. MACALISTER, the President, being in the chair.

Penal Cases.

The Council proceeded to hear the case of William Henry Roberts, registered as of 63, Lower Mount-street, Dublin, Lic. R. Coll. Phys. Edin. 1885, Lic. R. Coll. Surg. Edin. 1885, who had been summoned to appear before the Council on the charge that he had knowingly assisted certain persons who were not registered as dentists—namely, Mr. Keogh of 4, Lower Mount-street, Dublin, and Mr. John Blake Dillon, Messrs. William-Steyn, and Mr. M. William-Steyn, all of 23, Rathmines-road, Dublin, in performing operations in dental surgery by administering and offering to administer anæsthetics, and had so enabled these persons to treat patients and to engage in dental practice as if they were duly qualified in dentistry and dental surgery. The complainants were the Irish Branch of the British Dental Association. They were represented by Mr. Turner, barrister-at-law. Mr. Roberts was represented by Mr. Warburton, barrister-at-law. Mr. Roberts was also present in person.

Mr. TURNER, in addressing the Council, said that the facts were not in dispute in this case. Mr. Warburton had intimated to him that Mr. Roberts desired to express his regret for the infringement of the Council's rule and to say that he would take good care not to infringe this regulation in future, and he hoped therefore the Council would adjourn this case in order that it might be satisfied that he intended to obey its resolution. In no other way was the character of Mr. Roberts impugned.

Mr. WARBURTON stated that Mr. Roberts had been for 22 years on the Register of medical practitioners. He had a very large number of testimonials to the high professional character which he had borne all that time. He expressed regret for what was done as a mistake and by inadvertence.

The Council having deliberated *in camerâ*,

The PRESIDENT announced the decision as follows: Mr. Roberts, the Council have found the facts alleged against you proved to their satisfaction, but they have adjourned the further consideration of the facts proved until the next session of the Council, to be held in May. You will have notice of that consideration and you will be expected to satisfy the Council of your professional conduct in the interval.

The Coventry Dispensaries.

The Council then took up consideration of the cases of Arthur James Arch of Leicester House, Coventry, registered as Mem. R. Coll. Surg. Eng. 1904, Lic. R. Coll. Phys. Lond. 1904; William Walter Fenton of Avonmore, Warwick-road, Coventry, registered as M.B., Bac. Surg. 1893, M.D. 1894 Univ. Dubl., Lic. Midwif. K.Q. Coll. Phys. Irel. 1884; Thomas Alfred Hird, Norton House, Coventry, registered as M.B., Mast. Surg. 1882, M.D. 1900 Univ. Edin.; and William James Pickup, Swanswell, Coventry, registered as Mem. R. Coll. Surg. Eng. 1876, Lic. Soc. Apoth. Lond. 1877, M.B. 1880, M.D. 1893 Univ. Lond. They were summoned to appear before the Council on the following charge:—

That you have joined with other registered medical practitioners in forming and are one of the medical staff of a dispensary—namely, the Coventry New Dispensary Service, which systematically canvass for patients.

The complainants were Andrew St. Lawrance Burke, Gosford House, Coventry, registered as Lic., Lic. Midwif. 1895; R. Coll. Phys. Irel.; Lic., Lic. Midwif. 1895; R. Coll. Surg. Irel.; Alfred Pytches Blanchard Ellis of Earlesdon House, Earlesdon, Coventry, registered as Lic. Soc. Apoth. Lond. 1896; and John Inman Langley, formerly registered as of Parkside, Arcadian-gardens, Bowes-park, N., but now of 14, Warwick-road, Coventry; Mem. R. Coll. Surg. Eng. 1898, Lic. R. Coll. Phys. Lond. 1898.

Mr. McCardie, barrister, appeared for the complainants, Mr. Bodkin on behalf of Mr. Arch and Dr. Fenton, and Mr. Hempson, solicitor, on behalf of Dr. Pickup.

The PRESIDENT, before the proceedings in the case began, said that he regretted to have to inform the Council that Dr. Hird had died on the previous night. He was one of the practitioners in connexion with this case. In view of that tragical occurrence he would ask the parties whether they desired an adjournment of the case.

Mr. BODKIN said that he did not ask for an adjournment

although he thought it right to say that he was informed that this matter had preyed to a very large extent on Dr. Hird's mind.

The PRESIDENT asked whether any members of the Council were also members of the British Medical Association.

Several members of the Council signified that they belonged to the Association.

Mr. BODKIN, however, remarked that so far as he knew of this case the British Medical Association had nothing to do with his part of it.

Mr. MCCARDIE: I also shall have no objection to any member.

The PRESIDENT: If neither side objects then no difficulty arises.

Dr. LINDSAY STEVEN asked whether it was legal to allow members of the British Medical Association to take part in this case even if all parties were willing.

The PRESIDENT: The answer to that is that neither side will have any objection on that ground. Therefore it entirely rests on members of the Council themselves.

Mr. HENRY MORRIS remarked that he had just been about to declare that those of them who were members of the Association would not take part.

Mr. MCCARDIE addressed the Council on behalf of the complainants. He said that Mr. Burke was one of the medical officers of the Coventry Provident Dispensary. It had carried on its work in Coventry for a large number of years, and prior to June of the present year amongst the medical officers attached to that dispensary were the three gentlemen mentioned to-day. Dr. Hird was another officer. He had to say about Dr. Hird that he was a man of high ability and of good character and that he did amongst the poor of Coventry a long and beneficial work. In March, 1907, the three of the gentlemen who were now concerned resigned their places as medical officers of the dispensary. In June Mr. Burke and other gentlemen were appointed to take the places of those who had resigned. Those who had resigned formed another dispensary called the Coventry New Dispensary and had started work, so far as he could ascertain, in competition with the old dispensary in June of the present year. Mr. Burke was informed that canvassing was taking place. The new dispensary had a collector named O'Shee. The reports that reached Mr. Burke's ears led him to believe that he was making a house-to-house visitation to entice the patients of the old dispensary to follow the medical men to the new dispensary. However, after the complaint had been made to the General Medical Council the medical men involved wrote a letter to the Council and a copy of it had been supplied to the complainants. In that letter, which was now before the Council, they stated that no canvassing of any kind had occurred to their knowledge and they emphatically repudiated any suggestion that they had authorised any canvassing to take place. In their interview with Mr. O'Shee each of the medical men impressed on him that he should only call upon their patients. It was declared by Mr. O'Shee that beyond calling on their patients to inquire whether they intended to continue with them he was to say nothing to influence their decision. He assumed that the medical men in giving these instructions did not intend that the collector should canvass in any way. They had written a letter in which they repudiated any authority for this collector to canvass for them. In these circumstances Mr. Burke was ready to accept the medical men's repudiation and to leave the matter there.

Mr. BODKIN said on behalf of Mr. Arch and Dr. Fenton he regretted that the complainants had not assumed their present attitude at an earlier stage. He went on to say that Dr. Fenton, Dr. Hird, and Mr. Arch had been for a long time connected with the old dispensary. Without desiring to raise a controversy he might say that there were good grounds for dissatisfaction with the old provident dispensary and not one thing was done by the three gentlemen for whom he was now appearing without the support of the whole of their professional brethren in the locality. The gentlemen for whom he was appearing were obliged to resign owing to the condition of things there. They had a right to carry out the very best traditions of their great profession by starting another dispensary service under a rival dispensary for the advantage of the poor in this neighbourhood who were obliged to get medical attendance on coöperative principles. They appointed Mr. O'Shee at a fixed salary only, independent of any results he might obtain. When they had done that they gave the most precise instructions as to what he was to do. Each of these four gentlemen who had been attending the people in the old dispensary for years and years came to the conclusion that these people were their patients and they gave lists of these patients to Mr. O'Shee, with instructions to see them and ascertain whether they would desire to continue in the old dispensary or go forward with the same medical gentlemen to attend them who had attended them for years. Up to that point instructions were given. Not a single name but of a patient of these gentlemen was given to Mr. O'Shee, nor was it even hinted that he should call upon any other persons but those who were patients of these gentlemen themselves. Now he understood that the complaint was absolutely withdrawn, or, what was better still, it was admitted not to be proved in any way or shape.

Mr. HEMPSON, who appeared for Dr. Pickup, associated himself with Mr. Bodkin's remarks. He also stated that the new dispensary was formed at the request of the patients. The allegation was that Dr. Pickup and his friends canvassed to get patients. On the contrary, great numbers of the patients came and voluntarily enrolled themselves.

Mr. MCCARDIE said that whilst he withdrew the charges he did not criticise what had been said, because he hoped that the result of this withdrawal would be to create good feeling amongst the practitioners of Coventry.

The Council deliberated for a short time *in camerâ*.

The PRESIDENT, addressing Dr. Fenton and Dr. Pickup, said: I have to inform you, and through you Mr. Arch, that the Council have considered the case and they have come to the conclusion that the facts alleged against you in the notice of inquiry have not been proved. That ends the case.

The Council and the Press.

The PRESIDENT informed the Council that he had received a communication from the reporters who occupied a part of the gallery and they informed him that they heard with the greatest difficulty the discussions that were going on. They asked that when the tables on the floor were not occupied by parties in penal cases they might have seats at them. He was sure that the Council would accede to this request.

The Council agreed to fall in with the suggestion.

Companies Bills Committee.

On the motion of the PRESIDENT, the following were appointed additional members of the Companies Bills Committee:—Sir Charles Ball, Dr. Langley Browne, Mr. Morris, and Dr. Kidd.

Pharmacopœia Committee's Report.

The PRESIDENT moved that the following report submitted by the Pharmacopœia Committee should be received and entered on the minutes:—

From May 25th to Nov. 16th, 1907, the number o copies of the British Pharmacopœia (1898) sold by the publishers was 507. The total number of copies sold in the year beginning Nov. 17th, 1906, was 1032. Up to the present time 39,181 copies of the Pharmacopœia and 4461 copies of the Indian and Colonial Addendum had been sold. The stock of the Pharmacopœia remaining on hand now consists of 850 copies, with 1923 copies of the Addendum. It will thus be necessary in the course of next year to order the printing of a further impression of the Pharmacopœia. The committee recommend that the President be authorised to give directions accordingly.

The fourth edition of the Pharmacopœia Helvetica, issued August, 1907, has been received by the committee. It adopts generally the conclusions with regard to potent drugs and preparations which formed the subject of the recent International Agreement. Seven national Pharmacopœias, issued since 1904, have now been brought into harmony with that important convention.

The Committee of Reference in Pharmacy have presented an interim report on the revision of certain monographs of the British Pharmacopœia (1898), and their suggestions are still under the consideration of the committee. A special assistant has been appointed to carry out the pharmaceutical investigations which are required with reference to these and other proposals. The Committee of Reference is moreover engaged in obtaining statistics as to the frequency with which particular medicines, official and non-official, are actually prescribed in the United Kingdom. For this purpose they have procured analyses of upwards of 43,000 prescriptions, dispensed in all parts of the country. The information thence derived cannot fail to be of service in connexion with the approaching revision of the Pharmacopœia.

Sir John Moore has presented to the Council, on behalf of the Royal College of Physicians of Ireland, two interesting copies of the Pharmacopœia of the King's and Queen's College of Physicians. One is the Latin edition of 1826 and the other the English edition prepared under the presidency of Dr. William Stokes in 1850. The volumes have been placed in the Pharmacopœia Committee's library. The committee suggest that the thanks of the Council should be conveyed to the College for the gift.

Dr. NORMAN MOORE, in seconding the motion, referred to the gifts from the Royal College of Physicians of Ireland through Sir John Moore and said that they would be valuable additions to the library of the Council and would be of great use to the Pharmacopœia Committee.

The motion was then adopted.

Education Committee.

Dr. MACKAY, the chairman of the Education Committee, presented a report from it. In this it was stated that the committee had received a report from the inspector, Mr. Hannay, on the examinations of the Educational Institute of Scotland conducted during the past year and it had resolved that the institute should be recognised provisionally, on the understanding that the "Instructions to Examiners," as drawn up by the inspector and approved by the committee, should be carried out. With regard to the new intermediate certificate of the Scotch Education Department, which had been accepted by the Joint Examining Board of the Scottish Universities as qualifying for entrance to the medical course, the committee resolved that the certificate should in like manner be accepted by the Council, provided that it included all the subjects required by the Council in its regulations for students. The report further dealt with the Oxford and Cambridge Schools Examination Board school certificate examination. The committee resolved that as the examination was for pupils of 17 and upwards, and was accepted by the Universities of Oxford and Cambridge, and was therefore on the plane of a higher grade examination, the restriction that all the subjects must be passed at one time should be removed, and that the certificate be accepted provided that it included all the required subjects. It was also stated that the committee had carefully considered the statistics furnished by the licensing bodies with regard to the curriculum of students with a view of determining the best methods of presenting its report which it intended to submit to the Council in May next.

Dr. MACKAY said that following up the researches in the medical curriculum which were before the Council in May the various licensing bodies had been applied to for particulars as to the length of the course taken by their students. The committee had received in answer to that request a very full statement of the facts it desired to know. The committee had taken those statements into consideration. The work was difficult and delicate and the committee wished to have ample time to bring the abstract of those statements before the Council. When it did that, which it hoped would be in May, it would be able to put before the Council the following result—to show the percentage of the graduates of each licensing body who completed the course in seven years or less. The Council would then be able to take the average of the seven years' men and to show the actual curriculum as passed by the average seven years' men. It would be able to take also what might be called the ideal course as pursued by the best men, and in comparing the ideal with the average course it would see the amount of declination which actually took place. Following upon that it would be able to compare the different licensing bodies with one another. He thought it would be very valuable if the Council could make each licensing body familiar with what other licensing bodies were doing with the same problem. Finally, it would be able to disentangle from the statistics the full effects of any special regulations which any licensing body might have of its own and to see how these special regulations actually affected the length of the curriculum. The other points in the report were more or less information of what the Education Committee had done. The examination of the Educational Institute of Scotland had been from time to time inspected by the committee and had been very largely improved in consequence of the recommendations of its inspectors. Some further recommendations had been made and the examination would be recognised on the understanding that these further recommendations were carried out. The Scotch Education Department had instituted a new certificate called the intermediate certificate which would take the place of the four separate certificates of the department which had been granted in the past. This had been accepted by the Joint Board of the Universities of Scotland as qualifying for entrance to the medical course. He thought the certificate of the Education Department was a very great improvement upon the old arrangement and further than that they had for the first time in Scotland the recognition that the certificate brought with it the statement that a definite course of study had been pursued and not merely that an examination had been passed. The Scotch Education Department had made a great step forward in the institution of this certificate and the committee wished to express its satisfaction at what had been done. There were two examinations of a similar nature in connexion with the Oxford and Cambridge schools. With the senior of those examinations the committee was thoroughly satisfied and it had requested the examination board to remove the restrictions that all the subjects must be passed at the same time. With regard to the lower examination, certain changes had been made which had in a way taken the examination out of the direct supervision of the University. It seemed to fall into that class of examination which the Council dealt with in 1904 and which was specially referred to in the resolution of the Council—

> That if the standard of the examination contemplated in the scheme were such as to be generally accepted for entrance or matriculation by the universities of England the Medical Council would be prepared to recognise it as qualifying for entrance in a course of professional study.

The committee had instructed him to bring this matter before the Oxford and Cambridge Schools Examination Board and to ascertain whether this examination would meet the resolution of the Council. He moved that the report be received and entered on the minutes.

Sir JOHN MOORE seconded the motion.

Dr. LINDSAY STEVEN said there was a recommendation in the report concerning the intermediate certificate of the Scotch Education Department. It was as follows:—

> The committee recommend that in view of the fact that the certificate is at present recognised by the Universities, it is not necessary to take advantage of the invitation of the Scotch Education Department to inspect the examination but that inspection should be resorted to should the recognition by the Universities be withdrawn or suspended.

He thought such a recommendation was an error of policy on the part of the Council. He considered that it was not good policy for the Council to set aside any power it might have or invitation it might receive to inspect an examination. Registration of medical students was a most important item in medical education. It was voluntary registration, no doubt, but if ever they were to get registration of medical students more than a voluntary matter they must keep a close inspection on all examinations upon which that registration depended. And it would not help the Council if it should forego the power of inspecting this new examination. He was not satisfied to leave this matter entirely in the hands of Scotch Universities. Every examination that was recognised by the Council should be inspected by it.

The PRESIDENT said it was very desirable that the Council should not drop any power of inspection. He understood that the committee did not wish to make such a recommendation and he suggested that the report should be altered so as to read "the committee are of opinion" instead of "the committee recommend." Six months hence if circumstances arose the matter could again be dealt with.

This alteration having been agreed to the motion was carried, together with a motion that a sum of money not exceeding £20 should be placed at the disposal of the Education Committee for the purposes of the expenses in connexion with the supervision of preliminary examinations.

The Navy, Army, and Indian Medical Services.

On the motion of Dr. MCVAIL a report on the returns as to examinations for entrance to the Navy, Army, and Indian Medical Services since the last session of the Council was received and entered on the minutes.

Report on Students' Registration.

On the motion of Sir HUGH BEEVOR the report of the Students' Registration Committee was formally received and entered on the minutes. There was no discussion on it.

Penal Cases.

The Council resumed consideration of penal cases. Two charges respecting a Welsh practitioner and his assistant were heard together. In the first instance John Bernard Gabe, registered as of Pentrepoth House, Morriston, Swansea, Lic. Soc. Apoth. Lond. 1881, Lic. Fac. Phys. Surg. Glasg. 1881, was summoned to appear before the Council on the following charge:—

> That you have employed as your assistant in connexion with your professional practice a person not duly qualified or registered under the Medical Acts, ——, and have knowingly allowed him to attend and treat patients in respect of matters requiring professional discretion or skill.

There was also a charge against Morgan Watkin Williams, registered as of Trewernen, Llantwitfardre, Pontypridd, South Wales, M.B., Bac. Surg. 1900, Univ. Glasg., as follows:—

> (1) That you, being a duly qualified and registered medical practitioner, while acting as assistant to Mr. John Bernard Gabe, also a duly

qualified and registered medical practitioner, by your countenance, assistance, and coöperation knowingly enabled an unqualified and unregistered person, ——, who was also acting as assistant to the said J. B. Gabe, to attend and treat patients and engage in medical practice as if the said —— were duly qualified and registered. (2) That you signed a certificate of death, namely, of Alice Mary Jenkins, which stated that you had attended the said Alice Mary Jenkins in her last illness, and that you last saw her alive on May 4th, 1907, whereas in fact you had not so attended her or seen her, but the said —— had alone attended and seen her.

The SOLICITOR (Mr. Winterbotham) made a statement on the charges to the Council.

Mr. SAMUEL EVANS, K.C., M.P., appeared for Mr. Gabe and Dr. Williams. He went on to say that Mr. Gabe only employed —— at his own house up to March, 1907. A great stress of circumstances arose at this time. Mr. Gabe had had a very severe illness and in May he was away at Llandrindrod. The work was very heavy and pressed upon Dr. Williams. They found great difficulty in getting assistance. ——, who was qualified, he believed, in everything but surgery, was sent up to a branch surgery two miles distant, not to attend patients but to telephone to Dr. Williams. ——, however, did attend the child Jenkins but Mr. Gabe did not in any way authorise him to do so. As to Dr. Williams, it came to his knowledge that —— had done this and, as he was very hard pressed, he did sign the certificate. Dr. Williams had put into the certificate the phrase "I am informed," but there was the inaccuracy that he saw her on May 4th. Dr. Williams was very sorry for the error he had committed. He asked the Council to deal leniently with him in those circumstances. He had had a very severe lesson and perhaps the fact that he had been summoned there might meet the justice of the case.

After Mr. GABE and Dr. WILLIAMS had answered a number of questions the Council deliberated *in camerâ*.

The PRESIDENT, in announcing the decision, said: Mr. Gabe, the Council have carefully considered the facts alleged against you—namely, that you knowingly allowed Mr. —— to attend and treat patients in respect of matters requiring professional discretion or skill, and they have come to the conclusion that the acts alleged against you have not been proved to their satisfaction. Dr. Williams, in your case the Council have come to the conclusion that the facts alleged against you in the notice of inquiry have been proved to their satisfaction, but they have decided to adjourn the further consideration of the facts until the May session of the Council. You will be required to attend and the Council will expect you to produce evidence as to your conduct in the meantime, especially with regard to the employment of unqualified assistants and the signing of death certificates.

The Apothecaries' Hall of Ireland.

Dr. MCVAIL presented the report by the Examination Committee on the inspection (July, 1907) of the final examination of the Apothecaries' Hall of Ireland by the assistant examiners in surgery, Sir Lambert H. Ormsby and Mr. Conway Dwyer, who were appointed by the General Medical Council, and who acted also on this occasion as inspectors. Sir Lambert Ormsby and Mr. Dwyer forwarded the following statement as inspectors:—

> Every portion of the examination in the different subjects was carefully inspected and supervised by your assistant examiners in surgery, acting as your inspectors, and they regretted to see the ignorance displayed by the majority of the candidates in operative surgery, so that in this "starred" subject out of the five who entered only two showed sufficient knowledge of the subject to enable them to just get pass marks.
>
> We consider that the examination as a whole is carefully and conscientiously carried out, and that the standards of knowledge and the methods of examination in the different subjects were sufficient and searching in every detail.

The Examination Committee in its report suggests that the assistant examiners should be requested to supply in future more fully the important details of each part of the examination.

The report was received and entered on the minutes.

Dr. ADYE-CURRAN moved that the reports from the assistant examiners be discontinued until further orders. He contended that it was by no means clear from the Medical Act that the Council had power to create hybrid officers—if he might so call them—and ask these gentlemen who were primarily examiners to become also inspectors and reporters. It was quite foreign to the spirit of the Act that they should be asked to perform this hybrid work. The legislature evidently intended that the two officers should be kept separate and distinct. Inspectors of examinations should not interfere with the conduct of the examinations but it should be their duty to report. He held that these assistant examiners had no power to inspect and to report. For the last ten years, although the Apothecaries' Hall had been subjected to these stringent reports at every examination, still, as anyone on the Council would bear him out in what he said, these reports had been invariably satisfactory. The authorities of the Apothecaries' Hall had endeavoured by every means in their power to carry out the requirements of the General Medical Council. It was hard in the extreme that they should keep hammering away at inoffensive persons. He would now ask the Council in a spirit of fair play to make an order that these inspections should cease. The whole business from beginning to end seemed somewhat unnecessary. The Apothecaries' Hall had endeavoured to please the Council and it was a hardship to be reported upon without any apparent fault on its part.

Dr. SAUNDBY seconded the motion. Unless there was some very good ground for continuing the reports, he thought that the Council should discontinue them.

Sir C. NIXON pointed out that the examination was conducted partly by the Apothecaries' Hall and partly by the Council. He did not think that they could by a simple motion disturb the machinery which had been enforced since the start. He was in sympathy with Dr. Adye-Curran for doing the best he could for his own body, but the change must be made in a different way from what he was now suggesting. The Council had appointed excellent examiners, men who would keep the standard up to a reasonably high pitch.

The Legal Assessor (Mr. LUSHINGTON) said at the request of the Council for his opinion that it did seem to him that the General Medical Council might require from its assistant examiners a report as to how they had performed the duties intrusted to them and prescribed to them by the Council. It did appear to him that the assistant examiners could be called upon to report on the examination apart from surgery.

The PRESIDENT remarked that he believed it was the desire of the assistant examiners to have the advantage of reporting their opinions to the Council from time to time.

Dr. MCVAIL thought that as the Council sent assistant examiners in surgery they should have information sent to them in the same manner as information would be sent to each of the Colleges of the Conjoint Board. He moved as an amendment that the duties of the assistant examiners should be referred to the Executive Committee.

Sir C. NIXON seconded this amendment.

Dr. ADYE-CURRAN withdrew his motion and Dr. McVail's amendment was agreed to.

The New Treasurer.

On the motion of Sir THOMAS MYLES, seconded by Dr. NORMAN MOORE, Mr. Henry Morris was unanimously elected treasurer in succession to Dr. Pye-Smith.

Mr. MORRIS in a sentence accepted the office and thanked the Council.

On the motion of Dr. NORMAN MOORE the President was thanked for the manner in which he had occupied the chair.

The business of the agenda paper having been completed the session terminated.

ROYAL FREE HOSPITAL: AN APPEAL.—The committee of management of the Royal Free Hospital earnestly appeals for the sum of £10,000 to enable it to defray the cost of several important and urgently needed additions to the hospital. These improvements include the erection and equipment of two operating theatres and sterilising rooms, which were graciously opened on Dec. 3rd by Her Royal Highness Princess Christian of Schleswig-Holstein who is the president of the hospital. Mr. James Berry, the senior surgeon, said that Her Royal Highness had always shown great personal interest in the hospital. For many years they had been struggling with one very inadequate operating room and now they had two of the best in London. These improvements had often been most strongly urged upon the committee by the surgical staff of the hospital and by the visitors of King Edward's Hospital Fund. The demands made by the sick poor upon the hospital increase year by year. During the last year there were 2474 in-patients and 44,565 out patients and casualty cases. The bankers are Lloyds Bank, Holborn-circus branch, London, E.C., and the Secretary is Mr. Conrad W. Thies, Royal Free Hospital, Gray's Inn-road, London, W.C.

THE LANCET.

LONDON: SATURDAY, DECEMBER 7, 1907.

Municipal Maternity Homes.

AMONG those who in this country have worked hardest in their endeavours to improve the training and supervision of midwives the name of Sir WILLIAM J. SINCLAIR will always be honoured. With characteristic courage he threw himself heart and soul into the controversy which raged about the Midwives Act and he has not hesitated when he thought it necessary to express his convictions without fear or favour. Quite recently he has published a pamphlet in which he puts forward his views as to the means to be adopted for dealing with cases of abnormal labour and puerperal fever amongst the poor. In a short but most interesting historical review of childbed fever and childbed illness he shows how completely these diseases have been banished from the wards of properly conducted lying-in hospitals and demonstrates anew the distressing fact, which has been called attention to by every writer on this subject, that in private practice, especially among the poor, the mortality and morbidity of puerperal sepsis present almost as high a rate of occurrence at the present day as they did 40 or 50 years ago. The records of any of the foreign lying-in hospitals show that puerperal fever can be prevented entirely and with certainty. Nor, indeed, is it necessary to go abroad for proofs of the truth of this statement, for the records of the Rotunda Hospital in Dublin, an institution which has reached the highest point of efficiency in the prevention of child-bed sickness, show a total of 1887 women confined in the year 1905 with no mortality and with a morbidity of only 8·42 per cent. As a contrast to these figures we may recall the fact that the mortality of puerperal fever in Ireland as a whole in the year 1903 was 2·3 per 1000. While such results are obtained with ease in the well-conducted wards of a lying-in hospital, yet it is possible to obtain them with almost equal certainty in the homes of the poor when sufficient care is taken. Thus Sir WILLIAM SINCLAIR calls attention to the figures published by Dr. FRANK, Director of the School of Midwives in Cologne, where in ten years, amongst 4354 women attended at their own homes by properly trained midwives, only one death occurred which could be attributed to infection arising from the management of the labour.

In the same way the excellent work carried out by Dr. DE LEE in Chicago shows that midwifery practice can be carried on at the homes of the poor, even in such a city as Chicago, with a "mortality and morbidity that challenge the work of the best maternities in the world." In over 7000 cases of labour only one woman died from septic infection. In the face of facts and figures such as these how much longer shall we be content in this country to muddle along in the old way and to sacrifice to a preventable disease each year in the British Isles the lives of some 2000 women, most of them in the very prime of life? There are at last, however, some signs of real and of effective attempts being made to improve the position. The Midwives Act and the new regulations of the General Medical Council relating to the clinical teaching of midwifery are steps in the right direction and will undoubtedly bear good fruit in the future. Meanwhile, we must remember that the best trained midwife or the most highly skilled medical man may be placed in a hopeless position if they are called upon to undertake the delivery of a poor woman in such surroundings as are only too often met with in the homes of the poor. No doubt it is true, as Sir WILLIAM SINCLAIR points out, that in Manchester, as in most other big cities, the very poor are adequately provided for in workhouse infirmaries and in lying-in hospitals, and that the provisions of the Midwives Act are intended to safeguard them, so far as this can be done, when they are confined at their own homes. Properly trained midwives, however, are at present all too few in numbers and their prospects of obtaining a competent livelihood unfortunately are not such as to attract large numbers of the right class of women into their ranks. We may, however, look hopefully to the future to remedy this want and we must rely on the generosity of private individuals to assist in the provision of properly trained midwives in all parts of the country. How better could rich women show their gratitude than by providing their poorer sisters with that skilled assistance which they themselves have been able to secure in their hour of need? We may confidently expect, therefore, that the provision now being made for the cases of normal labour amongst that class of the poor which is not provided for by the workhouse infirmaries and the lying-in hospitals may be adequate in the future to protect them in normal childbed. Unfortunately, however, from time to time cases must occur which are not normal and where more skilled assistance than can be given by a midwife however well trained is required. For these cases the new Act has made provision in so far that the midwife is compelled to summon medical assistance but it goes no further, and one of the chief and most important defects of this piece of legislation is that it provides no means for the adequate remuneration of such skilled assistance. In some few large cities the local authorities have recognised their obligation in the matter and have made themselves be responsible for the medical men's fees but this is so far the case in only a very few places. In Manchester, for example, the City Corporation undertakes to pay the fees and in doing this undoubtedly it has established a most important precedent, a precedent of which Sir WILLIAM SINCLAIR avails himself in the suggestions which he puts forward. As the supply of properly trained and registered midwives becomes larger and the provisions of the Midwives Act are enforced more strictly and carried out more efficiently the number of cases in which the attendant midwife will find it necessary to call in medical assistance will become larger and larger. In the case of Manchester they have increased from 769 in 1905 to 1255 in 1906; and further, many of these cases will require careful nursing and the best possible surroundings if they are to recover. In other words, they will require removal to hospital. Where are they to be sent? It has

been said that all such midwives' cases should be admitted into the wards of the lying-in hospitals but these only exist in some of the large cities and would certainly not be able to accommodate all such cases, and even if they could there would still be the objection that this means taking away the patients from the care of the medical man first called in by the midwife in her difficulty, a procedure of doubtful fairness.

In view of the situation which has been created, at any rate in Manchester, by the consent of the corporation to be responsible for the fees of the medical men summoned by the midwife, Sir WILLIAM SINCLAIR advocates the extension a little further of the principle already adopted by the local authority "by the making of a municipal grant annually to the lying-in hospitals which would go towards covering the cost of maintenance and treatment of a suitable class of the parturient and puerperal women now sent in by the medical practitioners who have been summoned by midwives owing to the occurrence of abnormalities or emergencies in labour or connected with childbirth." Further than this, however, there are numerous cases of obstetric difficulty, foreseen or unforeseen, arising among the wives of the better class of working men when under the care of their own general practitioners. For normal cases of confinement among these women the improvement in management which we may hope to result from the better teaching of midwifery which is about to be instituted will no doubt suffice to reduce to the vanishing point the dangers to which they are subjected. There are, however, other cases attended with difficulties of slight or great importance, and the treatment of such cases at their own homes greatly increases the risk to the patient and adds very largely to the worries and responsibilities of the medical attendant. What is to be done for this class of case? "Is the patient to be subjected to the additional danger of treatment at home or the doctor to the humiliation and loss resulting from the transference of his patient to the care of someone else with an element of hospital abuse superadded?" For such cases the author of this pamphlet suggests the establishment of municipal maternity homes in all towns and cities. Such a plan would undoubtedly entail an increased expenditure on the part of the local authorities but it must be remembered that the outlay would be more than repaid by the avoidance in large measure of the expense which chronic invalid women are to any community. Such homes could be started at but a small expenditure and they would provide medical men with a means of treating those of their patients who needed it with the surgical cleanliness and skilled nursing of a well-appointed and well-conducted lying-in hospital. The municipal maternity home would fill up the large gap which exists between the lying-in hospital and the private nursing home, and those of its inmates who could afford it might well be called upon to pay something towards its maintenance. It may seem that such a plan is but the thin edge of the wedge in the introduction of State aid for our hospitals but this is an extreme way of regarding the matter. Sir WILLIAM SINCLAIR'S suggestion is one that is well worth the careful consideration of the profession and is a courageous attempt to grapple with a problem of long standing and of great importance to the community.

National Hygiene.

THE proceedings of the conference of representatives of sanitary authorities which was held at the Caxton Hall, Westminster, on Nov. 15th, as the outcome of a movement originating in the North of England (the earlier steps of which have been described in previous numbers of THE LANCET) were of a very interesting character. But whether much immediate result will follow is doubtful. It appears that invitations to send representatives to the meeting were issued by the promoters to about 400 of the sanitary authorities of the kingdom, that about 80 of these bodies accepted the invitation, and that some 70 of them acted upon it, but that a certain number of these had not given their representatives authority to vote upon the points to be submitted to the meeting, thus leaving them in the position of mere listeners or questioners. There have been instances in which great results have sprung from still smaller beginnings; but it can hardly be said that the prospects of real national progress in the direction of sanitary reform have been appreciably increased by the conference, mainly owing to the restricted support offered by the general mass of sanitary authorities. The chairman, Mr. HENRY W. NEWTON of Newcastle-upon-Tyne, in a remarkably lucid opening statement, explained the circumstances in which the representatives had been invited to assemble and the hopes which were entertained by the promoters of the meeting. He said that the object of the latter was to effect a union of the several local sanitary authorities of the country with a view to common and concerted action upon all questions relating to public health; and he announced that the title first suggested for the union, that of a "Supreme Health Authority," had been abandoned, presumably in recognition of the facts that none of the constituent bodies could have authority of any kind beyond the boundaries of their own districts, that a "union" of them could have no authority anywhere, and that nothing in this country except the Crown and Parliament can properly be described as "supreme." Leaving the question of nomenclature in abeyance he proposed a motion which was an expression of approval of the formation of a union or an association of the sanitary authorities of England and Wales for the purpose of promoting the health interests of the nation. After an almost formal seconding, an amendment was moved by Mr. J. UTTING, apparently on behalf of the sanitary authority of Liverpool, in a speech in which he somewhat unkindly described the motion as an attempt to effect a multiplication of amateur authorities and suggested instead the formation of a special department of the Local Government Board to deal with all questions relating to public health—a department "upon which representatives from the various associations of local authorities should be appointed." The conference seems at once to have perceived the danger, nay, the impossibility of this suggestion, and the general result of the discussion was that the original motion was carried by a large majority, while a second resolution accepted for the proposed organisation the title of "The National Union of Public Health Authorities" and placed it under the control of a council charged, as a first duty, with the task of preparing a constitution and rules for the government of the union and of submitting the same to the members for approval.

In common with the medical profession generally, we are fully convinced that the public health constitutes the greatest and most important of all national interests and we cannot be accused of indifference with regard to any means by which it can be protected or improved. We cordially welcome any proposal by which the magnitude of the stake involved may be rendered manifest either to the great body of municipal voters or to the candidates who seek their suffrages; but we should not fulfil our duty if we allowed any such proposal, however plausible it may appear, to escape the ordeal of criticism. As an actual matter of fact, the great obstacle to the protection of health and to the suppression of disease is ignorance. This ignorance depends essentially upon the fact that instruction in even the rudiments of physical science, still less in the nature of its methods and in the character of its results, holds as yet no recognised place in English education, either scholastic or commercial, and that hence the public attaches no more importance to the knowledge of philosophers than to the guesses of weather prophets. The medical profession, in relation to epidemic disease, has become a sort of corporate CASSANDRA, always disbelieved by those who hear its predictions and always justified by the event. In writing the history of the great struggle of the first Duke of WELLINGTON against the combined forces of NAPOLEON'S marshals and of domestic faction, Sir WILLIAM NAPIER described the Parliament of a century ago as being ignorant of everything except classical puerilities and political tricks. The intervening years have somewhat cast the classical puerilities into shade, but a knowledge of political tricks is still accepted as a first qualification for a legislator or a party leader and as a highly important one for an aspirant to office in the greater number of municipalities. In the case of many of the "local authorities" to whose care the health of their constituents is committed by the Imperial legislature the health policy of the day is merely the line of conduct which seems most likely to be contributory to the continued ascendancy of the political party of the majority. If "the other side" has protected the public health it is easy to accuse them of undue expenditure; if they have striven according to their lights to reduce expenditure it is always easy to charge them with being the patrons and producers of enteric fever or of diphtheria. Either will do for an election cry and, as a rule, both cries are equally insincere. Even where the medical officer of health has won the entire confidence of his sanitary committee and has made it understand that proper health administration is a matter requiring special knowledge of a highly technical kind, it by no means follows that the members of the health committee will be able to exert any useful influence upon the decisions of the larger body of which they form part, and by which, if they be not "party men," they will in all probability be disregarded totally. In view of these facts we do not anticipate any immediate amount of public advantage from combining into a union a number of sanitary authorities, save that their meetings would serve to educate the members of the union and so to expedite the time when a well-instructed public will insist upon its health as a community being placed first in all municipal policy.

One of the primary objects of the union will be, we learn from the first resolution passed by the conference, "to consider the different conditions and circumstances, general or local, whereby the disease is liable to be caused to man, and, as far as may be, to obtain their removal." It is obvious, except in so far as they may have been informed by their medical officers of health, that the majority of the authorities who propose to unite will for want of the necessary knowledge be unable to consider these matters as yet to any useful purpose. Unless by the extension of pecuniary support to pathological research, the bulk of the authorities cannot even approach the confines of their intentions; and their actions or resolutions to act might be productive of risk to the community. The practical applications of sanitary science can only be successfully conducted by men to whom both the principles and the details of the science are familiar; and the amateur sanitarian is not more likely to succeed in preserving the health of the community than the amateur practitioner in restoring that of the individual. We have nothing but respect for the motives of the municipal authorities which really desire to control the ravages of preventable disease and to check the enormous waste of money and of strength which it is now permitted to occasion; but we must beg the new union not to attempt to work too quickly. If the union submit to the guidance of its medical officers of health and sanitary engineers it may do a great work for the nation; if later it helps to spread knowledge of sanitary affairs among the people, so that health authorities may depend in their efforts for good upon the hearty coöperation of those whom they serve, it will amply justify its creation.

The Vaccination of the Rich and the Poor.

A COMMUNICATION which we publish in another column of our present issue relative to uniformity of conditions in vaccination raises an important specific point and incidentally it opens up a wide field for reflection. Dr. A. H. GERRARD draws attention to the fact that, while the lymph used by public vaccinators is manufactured under State control and the practice of vaccination is carefully supervised, the lymph employed by the private practitioner is purchased in the open market and the operation itself is performed without any of the excellent restrictions to which the public vaccinator is subjected. The private practitioner may, Dr. GERRARD alleges, scarify in as many places as his conscience or the desire of the parents may dictate, and he may regard the slightest reaction as "successful" vaccination. In his view the pauper, in the matter of vaccination, is better off than the prince, and he suggests as a remedy that vaccination should be entirely under State control—i.e., that in all cases it should be performed under the conditions which are now imposed upon public vaccinators and that it should be paid for in similar fashion and from the same source.

Dr. GERRARD has examined different strains of lymph and his conclusion therefrom is that commercial glycerinated lymph is not so carefully prepared as that issued by the Local Government Board. The general practitioner might, he suggests, be allowed to purchase lymph from the Government and obtain for it a guarantee of its purity. There is, of

course, much to be said for Dr. GERRARD'S suggestion but there are difficulties in the way of its realisation. The first is one that has often been dealt with in our columns—viz., the feeling of the medical profession as a whole against any branch of medical practice being relegated to a particular set of professional men. To make vaccination by a public vaccinator compulsory means the introduction, and perhaps the unwelcome intrusion, of one medical man into the private practice of a brother practitioner, and the feeling on the matter is far too natural, as well as too strong, to be ignored. Members of the public are also likely to resent being obliged to call in a medical man other than their own family advisers to perform the operation of vaccination. The second difficulty is no less real. If the State once commences the supply and guarantee of vaccine lymph to the profession as a whole, as also the supervision of vaccination, it will be difficult to see where the matter is to stop, and doubtless a demand would soon be made for the supply of all sorts of antitoxins accompanied with the usual "guarantees." The next step might be a demand for the State manufacture and guarantee of all drugs. It is true that vaccination against small-pox is on a somewhat different plane to other protective inoculations in that vaccination has still about it an element of compulsion; but it seems to us, as every parent can now obtain exemption merely by a statutory declaration, and can, moreover, demand the services of the public vaccinator, that the innovation suggested is hardly called for.

We quite think, however, with Dr. GERRARD that there should be some uniformity in the actual performance of vaccination and that the pretence to vaccinate efficiently with "one mark" should be rendered actually illegal. A satisfactory remedy for the "one-mark" evil would appear to be a State-prepared certificate setting forth that the child has been vaccinated in at least three or four places and that so many insertions have "taken." As regards the actual aseptic performance of vaccination we incline to the opinion that outside the range of the public vaccinator the matter must be left to the medical profession. We simply do not believe that there are still existing medical men who cannot be trusted to perform an "operation" of the nature of vaccination in proper aseptic fashion, but if any evidence to the contrary exists the attention of the General Medical Council had better be called to the subject with the view of making instruction in the technique of vaccination a more closely considered point in the medical student's curriculum.

Annotations.

"Ne quid nimis."

METROPOLITAN HOSPITAL SUNDAY FUND.

A MEETING of the council of this Fund was held on Nov. 29th, at the Mansion House, under the presidency of the Lord Mayor. The report, which was submitted and adopted on the proposition of Archdeacon Bevan, seconded by the Rev. W. Hardy Harwood, stated that the amount raised this year for the fund had been £78,651. This sum included £30,000 which had been received from the executors of the late Mr. George Herring. Grants had been made to 159 hospitals, 57 dispensaries, and 27 nursing associations. A sum of £4077 had been spent on surgical appliances for the poor. A balance of £4088 had been carried forward. It was decided that the annual meeting of the constituents of the Fund should be held on Dec. 17th, the date suggested for next Hospital Sunday being June 21st. It was also decided to recommend the addition of the following gentlemen to the council to fill vacancies: Lord Leith of Fyvie, the Hon. Harry Lawson, Sir James Reid, Sir Thomas Smith, Mr. W. Douro Hoare, the Rev. Canon Curtis, and Mr. Thomas Wakley.

EGYPTIAN MUMMIES ABOUT 1100 B.C.

IN the last published report of l'Institut Egyptien there are two papers by medical men worthy of attention. The institute was founded in 1859 to carry on the literary and scientific work for which l'Institut d'Egypte was originally created by Napoleon and his famous group of men of science during the French occupation of Egypt. Until about ten years ago Englishmen were very rarely admitted to the honour of membership for, in spite of the red coats at headquarters, France still remained in jealously guarded, intellectual occupation of Egypt. Now matters have somewhat changed and no less than eight English names appear in the list of active members, the number of which is strictly limited to 50. To the report under notice Dr. Bäy contributes a paper on the electric phenomena that accompany the "khamsin" wind which in Arabia and Syria is called the "simoom" and bears the name of "sirocco" in Algiers and Sicily. The wind blows intermittently from the south during a period of about 50 days in March, April, and May. The heated air comes straight from the desert charged with very fine dust and sand, obscuring the sun and compelling people to shut up their houses as far as possible. The phenomenon usually lasts only three days, of which the second is the most trying and reminds those exposed to it of the sensation of standing near a furnace. During the khamsin the earth, charged with negative electricity, holds in equilibrium the positive electricity of the atmosphere until at the close of the phenomenon, generally accompanied by a few drops or showers of rain, the electricity is changed, the air becoming negative and the ground positive. Meanwhile accidents sometimes occur to the large machines which have recently been constructed for supplying electric light. Dr. G. Elliot Smith has been working for three years at the investigation of embalming in the twenty-first dynasty, having been presented with 44 mummies of that period for the anatomical department of the Egyptian School of Medicine at Cairo. These mummies were found at Dêr el Bahari in 1891. In spite of many authors, and more conjectures, nobody knows exactly when the ancient practice of embalming began. In pre-historic days, more than 7000 years ago, the inhabitants of Upper Egypt exposed their dead to a sun-drying process which has preserved them until to-day. It is suggested that so long ago as the fifth dynasty the pyramid builders made use of artificial means to resist the natural decay of the dead body, but there is no certainty as to what they did. The Cairo Museum shows, by its unique collection of mummies, that real mummification, aided by art, belongs to the period between the seventeenth dynasty and the early days of the sixth century of the Christian era. Dr. Elliot Smith reminds us that during this period of about 2000 years the methods of embalming underwent many changes. From the eighteenth to the twentieth dynasties the methods adopted consisted only in the preservation of the body itself, and as everyone knows who has seen the Royal Rameside mummies this was accomplished so successfully that the mode employed can only have been the result of centuries of experiment. About the beginning of the twenty-first dynasty (a period of decline, when Egypt was being menaced by victorious Assyria) the embalmers initiated

a new practice which was an attempt to restore to the shrunken body the form which it had lost during the early stages of embalming; this was done by packing under the skin and in the cavities linen, sawdust, sand, and other materials. As shown by photographs, it was customary for embalmers to break through the ethmoid by way of the nose and to remove the brain through the opening thus made. The cranial cavity was then usually filled with strips of linen and a small quantity of resin. The chief incision of the embalmer usually consisted of a large, gaping, vertical wound in the left lumbar region, extending from the iliac crest, a little behind the anterior superior spine, to the margin of the ribs. By this incision the organs of the abdomen and thorax were removed with one exception, for the heart (filled with mud) was always left attached to the great blood-vessels, though sometimes pushed out of place. When the various organs had been removed both the body itself and the viscera must have been put into a saline bath, as Herodotus described. This bath was probably continued for some weeks. The nails of the hands and feet were carefully secured by a piece of string wound round the fingers and toes so that they might not fall off with the epidermis. Dr. Elliot Smith's photographs show very well the impressions left by the string which has sometimes remained in position on a finger or toe. The collapsed limbs were packed through as few incisions as possible with large quantities of materials to restore to them some appearance of their original form. By reversing the body mud was poured into the neck through the thorax and wedged in with linen. The breasts of two females were similarly packed by the tunnelling hand of the embalmer, perhaps armed with a knife. The back, buttocks, and mons Veneris were also stuffed. In one case sheets of fine leather had been sewn to the healthy skin of a thin old woman to hide wounds which were probably bed-sores. The eyes naturally collapsed but artificial eyes were placed in the orbits usually consisting of a piece of linen with a spot of black paint for the pupil. Onions were sometimes used for artificial eyes and this vegetable was often found in the pelvis or thorax, perhaps as a deodorant. The dried viscera were returned to the body wrapped in neat parcels: a wax image of the hawk-headed god being placed with the intestines, the ape-headed *Hapi* often with the lungs, the jackal with the stomach, while the fourth of the funerary genii (all children of Horus, to whom the Canopic jars were dedicated), the human-headed *Amset*, is usually found wrapped up in the liver. The incision wounds, which varied in number and position, were sometimes stitched up with a running thread, while the aperture in the flank was covered with a wax or bronze plate bearing the usual symbol of the sacred eye. The stuffing process was performed in mummies of all ages and both sexes, even in a newly born babe. As few openings as possible were made on the surface of the body; for instance, the thighs were stuffed from the abdomen and the back from the lumbar wound. The legs were packed by means of a skin incision between the great and second toes and the arms had usually only one incision. The men were painted red and the women yellow and the eyebrows were tinted black. All these elaborate measures were apparently taken during this dynasty to preserve the form of the body and to make it take the place of the red or yellow statue, formerly buried with the dead, to represent the deceased. The idea of this statue was that when the mummy should have lost all likeness to the person during life the statue would remain as a dwelling place for the *Ka*, the spiritual double which represented in Egyptian religion the genius of the Roman. The *Ka* is usually translated by the word "soul" or, more accurately, the personality of the deceased. It was for the sake of the *Ka* that objects which he might be supposed to want were buried in a tomb, so that he could have every comfort during his periodic visitations to the burial place. The extraordinary practice of stuffing the mummy, difficult to explain in a people with such intense veneration for their dead, was soon discontinued for later embalmers were in the habit of imitating the form of the deceased by means of external bandages until eventually, under the Ptolemies, the art of bandaging was even more elaborate than the care bestowed upon the preservation of the body.

MISS FLORENCE NIGHTINGALE, O.M.

THE announcement that His Majesty the King has conferred upon Miss Florence Nightingale the Order of Merit will receive the approval of every civilised man and woman throughout the world. No name is perhaps more familiar than that of Florence Nightingale and no woman can be more worthy of honour than the possessor of that name. The noble work which she did in the Crimea is too well known to our readers to need any detailed description from us but we may quote from the *Times* Mr. McDonald's eulogy of her: "Wherever there is disease in its most dangerous form and the hand of the despoiler distressingly nigh, there is that incomparable woman sure to be seen. Her benignant presence is an influence for good comfort, even amid the struggles of expiring nature." On her return to England when the war was over, a sum of between £45,000 and £50,000 was subscribed for, and presented to, her as a public testimonial. With this money she generously founded the Nightingale Home for Trained Nurses. Thus, it may be said that to Miss Nightingale we owe not only the foundation of our military system of nursing but also the whole system of lay nursing in this country. From her early days Miss Nightingale has been devoted to nursing and when quite a girl sought out the sick among her poorer neighbours and nursed them, while now, at the age of 87, she still takes the keenest interest in all that concerns the calling which is so dear to her heart. Among the 20 members of the Order of Merit none can have a greater claim than the lady who has triumphantly fought with sickness and misery.

THE OPHTHALMOMETER AND ITS LIMITATIONS.

THE invention of the ophthalmometer belongs to that era of extraordinary fertility in ophthalmology which is associated with the names of von Helmholtz, Donders, and von Graefe. It was designed by von Helmholtz for measuring the curvatures of the refracting surfaces of the eye. An accurate knowledge of these measurements is the basis of physiological optics and the ophthalmometer as an instrument of precision for use in the laboratory was well adapted to its purpose. It has solved problems which had previously defied all efforts and in other cases it has provided an alternative method which insured greater accuracy. In 1880, 26 years after its invention, Javal attempted to apply the ophthalmometer to clinical uses and since then many modifications of the Javal and Schiötz ophthalmometer have been placed upon the market. For the most part they differ only in minor details, such as the exact means used for doubling the corneal image, the fundamental principle of the instrument. A recent modification, the "Sutcliffe" self-recording keratometer, has been brought to our notice. In it the image is tripled by an ingenious use of two cylinders of extremely low focal length split into three lengths at right angles to the axes, the centre slab of each set being slightly decentred. There is a number of slighter alterations in detail, of which reduction in price is perhaps not the least important, and these appear to us to be improvements on the original Javal and Schiötz instrument and its many successors. We have tested the instrument and have found it trustworthy as a means of determining corneal astigmatism. We think,

however, that it is incumbent upon us to express a word of warning as to the use of the ophthalmometer in clinical practice. The instrument determines the corneal astigmatism and nothing more. Now it has been shown by Donders, Knapp, Sulzer, and others that the ophthalmometric determination of astigmatism differs greatly in a large number of cases from the value obtained by retinoscopy and subjective methods. This is due chiefly to lenticular astigmatism which is entirely ignored in the ophthalmometric investigation and which varies according to no known rules, so that it has the effect sometimes of diminishing, and sometimes of increasing, the total astigmatism of the eye. Hence in our opinion the ophthalmometer is an instrument of extremely limited utility in clinical work. Indeed, there is a specious facility in the determination of refraction by the machine which in the hands of unqualified opticians and others who have not acquired skill and experience in more trustworthy methods is a distinct menace to the public. Those of our readers who wish to become more acquainted with the apparatus can obtain it from Messrs. George Culver, Limited, Pentonville, London, N.

THE COLOUR OF THE HAIR.

So far as the subject has been pursued very little light has been thrown upon the nature of the pigment of the hair or of the conditions which govern its preservation. Scientific research can offer therefore but little comfort to those who especially in early life see signs of their hair turning grey. We may call the process an arrest of pigmentation or of nutrition, but the factors which determine this arrest are not so well understood as to indicate any effectual preventive measures. It is well known that the grey or white hair as a grey or white hair continues in many instances to grow and to flourish, so that not all at any rate of its nutrition is stopped but certainly its pigmentation is. The analysis of hair gives little clue as to what it is exactly that takes place. Some have stated that the pigmentation depends upon the production of an iron compound derived possibly from the hæmoglobin of the blood; on the other hand, others have found that the large quantity of iron present in the hair does not belong to the pigment at all, and indeed the pigment of the negro's hair was found to be entirely free from iron. Hair, again, contains a considerable amount of sulphur, a fact which has suggested the treatment of falling hair with this element in some form or other but the success attending such an outline of treatment has been doubtful. Of the other constituents of the hair may be mentioned the alkaline sulphates, calcium sulphate, and quite a large amount of silica. It is difficult to trace any pigmentation effects to any of these salts, unless it be that the silica or part of it is combined with iron. Dark hair would appear to contain more iron than does blonde, while it has been stated that auburn or red hair contains much the same amount of iron as dark hair, but the iron is said to be present in a more highly oxidised state. There are, of course, a black and a red oxide (rust) of iron, the latter containing more oxygen than the former. Whatever may be the exact composition of the pigmentation of the hair or the way in which that process is carried on, it is not easy to explain exactly why alterations of the colour of the hair occasionally take place during the course of a serious illness or why it may become whitened even in a few hours by mental disturbance. A somewhat remarkable example of the effect of mental disturbance in which the opposite was the case is reported in our columns this week. The patient suffered from occasional severe attacks of mental depression and with each attack her hair, which is naturally a dark auburn, had turned quite black. When she recovered from the attack the hair resumed its natural colour again. It seems probable that disturbances of the nervous equilibrium effect some changes in the pigmentary process by arresting the combination of those elements which form the colouring material, or possibly they are prevented from gaining access to the hair follicles at all. The deterioration of the colour of the hair would appear to be due directly to some defect of nutrition which may be permanent or transitory, and disorders of nutrition have many exciting causes.

THE TUBERCULIN OPHTHALMIC REACTION.

DURING the present year certain modifications of the original tuberculin reaction for tuberculosis have been introduced. The first of these was that of von Pirquet. This observer read a paper on May 8th before the Berlin Medical Society describing the results of cutaneous inoculation with a 25 per cent. solution of tuberculin. In tuberculous children a typical papule appears within 24 hours, while in the non-tuberculous no reaction appears. It was, however, found only to be of use in early life, since practically all adults give the reaction. Eight days later Wolff-Eisler showed that a reaction could be obtained in the conjunctiva with a weak solution of tuberculin, the reaction consisting of a marked conjunctivitis of the eye to which the tuberculin was applied. Vallée established the diagnostic value of this ocular test upon animals and applied the name of the ophthalmo-reaction to it, by which name it is at present generally known on the continent. Shortly afterwards, on June 17th, Calmette by reducing the strength of the tuberculin solution found that the reaction obtained was so mild that it might be used for diagnostic purposes in man. Since that time large numbers of observations have been made upon the reaction and its value in diagnosis. At a recent meeting of the Pathological Section of the Royal Society of Medicine a paper was communicated by Mr. L. J. Austin and Dr. O. F. F. Grünbaum [1] recording their observations on 70 cases. They concluded that the tuberculin ophthalmic reaction promised to be a useful but not infallible means of diagnosis in obscure cases of tuberculosis. At the same meeting Dr. J. E. Squire referred to observations on 120 cases at the Mount Vernon Consumption Hospital and Mr. Sydney Stephenson to more than 50 trials of the test, both observers expressing favourable opinions as to its value but mentioning that under certain conditions a severe reaction might occur. Dr. Squire had noticed an especially severe reaction on a second trial of the test in one case and he suggested that it might be found necessary to readjust the dosage. In the *Berliner Klinische Wochenschrift* of Nov. 25th Dr. Sigismund Cohn of Berlin records his observations upon 310 cases. He concludes that a positive ophthalmic reaction renders a diagnosis of tuberculous disease highly probable but that a negative reaction does not exclude that disease, since 50 per cent. of severe cases of pulmonary tuberculosis fail to react. On the other hand, early and mild cases of that form of tuberculosis only rarely give negative results. Dr. Cohn finds that a considerable proportion of cases of typhoid fever give a positive reaction, especially in the non-febrile stage and in convalescence. He obtained a reaction in eight out of 12 cases. It is, however, interesting to note that Mr. Austin and Dr. Grünbaum observed no reaction in eight cases of typhoid fever examined by themselves. Dr. Cohn further finds that a subcutaneous injection of tuberculin in the usual manner two or three weeks subsequently to an ophthalmic test often induces the conjunctival redness and injection to reappear. An interesting paper by M. J. Comby of Paris is published in *Le Bulletin Médical* of Nov. 20th describing the results of 300 observations upon the test in children. In his earlier trials M. Comby employed the test

[1] THE LANCET, Nov. 23rd, 1907, p. 1462.

as described by Calmette—viz., by precipitating tuberculin with 95 per cent. alcohol, drying the precipitate, and dissolving it in sterilised water to form a 1 per cent. solution. No form of glycerinated tuberculin must be used. He found that the reaction, which ordinarily appears in from six to ten hours, might be delayed until 24, or even in exceptional cases to 36 or 48 hours. The reaction usually appeared in the region of the semilunar fold and caruncle and might be very slight or in some cases more intense, with general redness and swelling of the conjunctiva and some sero-purulent secretion, lasting in some cases as long as eight or ten days. The occurrence of so severe a reaction, even though rare (M. Comby observed it only twice), is calculated to bring the reaction into discredit. Accordingly M. Comby reduced the strength of the solution to 1 in 200. He states that his experience of the test with this weakened solution is entirely favourable and he recommends it without any reservation. Even with this, however, he has once observed an intense reaction. He states that on no occasion was any general reaction obtained from the ophthalmic application of tuberculin. The reaction may be repeated and the test does not appear to lose any of its value; in non-tuberculous cases the result is uniformly negative, while in tuberculous cases the reaction develops after each application. M. Comby regards the ophthalmic reaction as of great practical value in the diagnosis of obscure cases of tuberculous disease in children and anticipates that it will enable effective treatment to be started at an earlier period than has been possible hitherto. This reaction, although of so recent introduction, has received a great deal of attention and the usual enthusiasm for *novæ res* has been amply exemplified. Scarcely a discordant note is to be found in the pæan of praise, though Kalt, indeed, has recorded some exacerbation of ocular disease in cases in which the test has been applied. The majority of observers agree that it is harmless, that the discomfort produced is trifling, that the patient's general state is unaffected, and that the reaction occurs in every form of tuberculosis unless the patient is moribund or nearly so. The era of adverse criticism has not yet set in, though it is as certain to follow as night to succeed day. Only then shall we be in a position to gauge accurately the specific value of the new procedure. In the meantime it scarcely requires mention that a positive reaction merely demonstrates the presence of some tuberculous lesion in the individual, possibly a lesion long latent; it does not follow that any particular disease under immediate observation is necessarily tuberculous. That the test is devoid of danger further investigation can alone decide. The disastrous experiences of the past rapidly fade into oblivion unless they are deliberately recalled to serve as a wholesome corrective; we may instance Koch's tuberculin as a case in point. The tuberculin ophthalmic reaction is still in the experimenta stage and the time is not yet ripe for it to be advertised broadcast by wholesale druggists in the manner to which our attention has recently been called as a sure test "absolutely free from danger." We should like to see some further investigation of carefully selected cases, specially designed to determine whether the reaction is as innocuous as has been assumed.

PLAGUE AND THE "TARABAGAN" DISEASE IN MONGOLIA.

IT has long been known that a species of marmot, the *tarabagan*, found in large numbers in certain parts of Mongolia, is liable to a form of epizoötic which is highly infectious and fatal to man. The disease resembles in many respects bubonic plague and several Russian writers have concluded that the two diseases are identical. So far as we are aware, however, no positive proof has yet been published of their identity, and particularly bacteriological evidence of the nature of the epizoötic seems to be lacking. A melancholy interest attaches to a paper on this subject published in the Russian medical journal, the *Vratch* (1907, No. 9), and written by the late Dr. M. T. Schreiber who himself recently died from plague contracted in the Government laboratory situated on a fortified island near St. Petersburg.[1] Dr. Schreiber was sent by the Russian Government, at the end of 1905 and beginning of 1906, on a scientific expedition to the infected region. He really made two expeditions, separated by a short interval; the second alone occupied two and a half months and covered 1600 versts (about 1000 miles) of ground. Unfortunately, on neither occasion was he able himself to observe cases of the disease either in man or animal, apparently owing to the fact that this disease breaks out only in the autumn and disappears for the rest of the year. From information derived on the spot, however, the details of a considerable number of outbreaks, in man or in the *tarabagan*, or in both, were collected and are set forth in the article in question. These outbreaks resemble in every respect those already reported by other observers; and the details, while interesting in themselves, do not, unfortunately, help to throw further light on the main problem—the true relation of this disease to plague in man. The article concludes with a brief summary of the points which seem to militate for or against their identity; among the latter are noted (1) the undoubted occurrence of these epizoötics without human beings becoming infected; (2) the fact that field mice, which are known to be susceptible to plague, do not contract this disease from the *tarabagans*, though they have every chance of doing so; and (3) the fact that domestic animals also escape it. Dogs, in particular, it is noted, eat greedily and frequently of the flesh of the dead marmots yet never develop the disease. The final solution of this problem can only come from a thorough bacteriological investigation of the disease as manifested in man and animal, and such investigation could only be rendered possible by despatching future scientific expeditions to the infected area in the autumn, since that appears to be the only time of year at which the disease prevails.

CHRISTMAS FARE.

WE have received a letter from Mr. J. C. Brace with a great part of which we are in thorough accord. Mr. Brace points out that during the coming weeks our streets will exhibit an abnormal number of carcasses tastefully adorned with coloured ribbons and "Compliments of the slaughterman." We must say that we have never seen this last refinement. He further says that the school children will look in at the open doors of the slaughter-house. Very likely they will; even so tender-hearted a person as Thackeray when a child contributed 6*d*. to see a bullock killed. Mr. Brace also says that doomed beasts will be shown alive outside many butchers' establishments and concludes with the following remarkable suggestion:—

> If the human heart still pants for a festival of flesh and blood cannot its Moloch of the stomach be appeased by a sacrifice of game, fowl, or fish? These creatures being so much weaker and their nervous organisation less highly developed than is the case with the "butcher's" victims the *demoralisation to the slaughterman* would be enormously lessened, to say nothing of the quantities of blood, offal, and sickening stench saved from polluting the sweet Christmas air.

Now we quite agree that the exhibition of "doomed beasts" surrounded by the carcasses of their fellows is an abomination, but it is rarely seen now and, in fact, we think is forbidden in London. Nor should children be allowed to look at slaughtering. But the decoration of carcasses may be regarded as an interesting survival of a piece of folk-lore. An ancient Greek only killed his own cattle as a sacrifice and his family wept bitterly on the occasions when this had to be done. Mr. Brace should consult the passage in the

[1] THE LANCET, March 23rd, 1907, p. 836.

third book of the Odyssey when Nestor sent for the family goldsmith to prepare gold adornments for the sacrificial heifer's horns. When, however, the same ancient Greek was in an enemy's country he positively wallowed in cattle slaughter and ate hugely of the slain.[1] We cannot see that it is less demoralising to slay a hen than to slay a sheep, if, indeed, either be demoralising. But two things are certain: one is that many persons at Christmas, to say nothing of other seasons, eat too much meat and the other is that live beasts should not be exhibited among dead ones. Moreover, as germane to the subject, the grossly overfat cattle and pigs of the Cattle Show are neither wholesome for food nor objects of beauty.

TYPHOID FEVER IN THE AGED.

IT is generally believed that typhoid fever is very rare in the aged. But recent observations appear to show that its rarity has been exaggerated. In 1898 Dr. Manges, an American writer, stated that of 3634 deaths from typhoid fever occurring in New York from 1887 to 1896 96 (or 2·6 per cent.) were in persons over the age of 65 years, and 414 (or 11·3 per cent.) were in persons aged between 45 and 65 years. He thought that the disease was not infrequent in the aged and was often overlooked. Professor William Osler found that in 829 cases of typhoid fever admitted into the Johns Hopkins Hospital up to May, 1899, six of the patients were between the ages of 50 and 60, and six were over 60 years. He agreed with Manges that, as the course is often atypical, cases are overlooked. In the *American Journal of the Medical Sciences* for October Dr. A. S. Hamilton has published an important paper on the subject. In continuation of the work of Dr. Manges he has collected statistics from the Health Departments of Chicago, Boston, and St. Louis. Out of a total of 3885 deaths from typhoid fever in these cities in the years 1897–1901, 369 (or 9·5 per cent.) occurred in persons over the age of 50 years. In an outbreak of typhoid fever at the Hospital for the Insane at Independence, Iowa, he found that a number of persons well advanced in years contracted the disease. Out of a total of 133 cases, 27 (or 14·3 per cent.) occurred in persons over 50 years of age; of these 6 occurred at the ages of 50 to 54, 8 at the ages of 55 to 59, 9 at the ages of 60 to 64, 1 at the age of 65, 2 at the age of 71, and 1 at the age of 78. As a large proportion of the patients in the hospital were advanced in years these figures cannot be taken as showing the liability of the aged in general to the disease. However, in two cottages and in two wards of the hospital in which the disease was particularly prevalent the ages of the inmates were taken into account with the following results. This portion of the hospital contained 318 men, of whom 65 (or 20·44 per cent.) contracted the disease. At ages from 20 to 29 years there were 55 patients, of whom 15 (or 27 per cent.) contracted typhoid fever; at 30 to 39 years, 89, of whom 24 (or 27 per cent.) were affected; at 40 to 49 years, 78, of whom 17 (or 21·7 per cent.) were affected; at 50 to 59 years, 44, of whom 5 (or 11·3 per cent.) were affected; at 60 to 69 years, 41, of whom 2 (or 4·8 per cent.) were affected; at 70 to 79 years, 8, of whom 2 (or 25 per cent.) were affected; and at 80 to 89 years, 3, of whom none were affected. The average age of all the patients was 43 years, while the average of those who contracted typhoid fever was only a little less, 38·9 years. The symptoms of typhoid fever in the aged differ from those in younger people. In three of the cases observed at the Independence Hospital the degree of aberration was so great that the diagnosis would not have been made but for the Widal reaction. All the cases differed widely from one another, so that it would be difficult to construct a type of typhoid fever in the aged. However, in general it may be said that the cases differ from those in younger people in the frequent absence of certain ordinary signs—the type of fever, rose spots, enlargement of the spleen, and epistaxis. On the other hand, complications which are at times misleading in diagnosis are likely to be marked. In only one of the 27 cases was there any tendency to the production of the typical temperature chart. The ordinary diurnal variation was much increased. In almost every case the temperature was remittent; in seven cases it was even intermittent, reaching normal twice or thrice during the first week. In five cases the highest temperature recorded was between 105° and 105·8° F.; in 15, between 104° and 105°; in five, between 103° and 104°; and in one it was 102·6°. The average temperature was much lower than this. Usually it did not rise above 102° or 103°. With a low grade of fever lysis occurred unusually early. The temperature generally was normal or almost normal by the eighth to the eleventh day, but it rarely remained so and there was a tendency to prolongation of slight fever. In only three cases did the temperature remain normal after reaching it; in seven cases slight variations extended over a considerable period, and in 11 there were in addition recrudescences. Chills and sweats seemed more common than in the young. In six cases there were well-marked rigors. Disturbances of the circulation were common; in 70 per cent. the pulse was described as "bad" at some time and in 39 per cent. it was intermittent. Disturbances of the respiratory system were common. In 18 cases tympanites was marked, which was probably partly due to flabbiness of the muscles.

[1] Iliad, passim.

THE CURABILITY OF CERTAIN FORMS OF SEPTIC MENINGITIS OF AURAL ORIGIN.

AT a meeting of the Société Médicale des Hôpitaux of Paris on Nov. 15th M. Paul Laurens read an important paper on the curability of certain forms of septic meningitis of aural origin. He pointed out that the curability depends upon the kind of microbe: streptococcic meningitis is very grave; in pneumococcic and staphylococcic meningitis recovery is more common. He reported the following case. A boy, aged 15 years, was taken to hospital on Sept. 7th, 1907, suffering from acute suppurative right otitis media. Paracentesis was performed, an abundant discharge of pus followed, and an occlusive aseptic dressing was applied. On Sept. 11th there were vomiting, headache, vertigo, and horizontal nystagmus. The tuning-fork was heard through the bone, showing that the labyrinth was normal. The tympanum was badly drained. "Labyrinthisme," which frequently occurs in young subjects suffering from otitis media, with retention was suggested. However, lumbar puncture was performed. The liquid was clear but gave on centrifugalisation a slight deposit composed of red corpuscles and some polynuclears. Cultures on gelose remained sterile. Half an hour after the puncture the vertigo and nystagmus had much diminished. A large opening was made in the membrana tympani. On the following day the temperature was 102·4° F., headache was severe, there were photophobia and spasm of the facial muscles, and the nystagmus was increased. Vertigo was incessant even when the patient was in bed. Kernig's sign was well marked. Lumbar puncture yielded clear liquid which on centrifugalisation furnished a slight deposit composed almost entirely of polynuclears. These were in manifest histolysis but to direct examination showed no microbes. However, the changes in the polynuclears caused septic meningitis to be diagnosed without waiting for the results of culture. An intravenous injection of four cubic centimetres of a 1 per cent. solution of collargol was given and was followed in five hours by a violent reaction—anguish, rigors, and a temperature of 103·3°, but on the 13th the temperature fell to 100·4° and the vertigo diminished. The diffuse nature of

the infection negatived any surgical intervention. It was decided to treat the disease by injections of collargol and lumbar punctures. The diagnosis was confirmed; cultures on gelose showed a coccus in chains and in pairs which at first was thought to be a streptococcus but on further examination was found to be an enterococcus. Another injection of collargol was given and lumbar puncture was performed. The liquid was clear but issued under pressure and the deposit was more abundant. Microscopic examination and culture gave the same results. On the 14th the temperature fell to normal, the headache and vertigo and Kernig's sign disappeared, and the nystagmus was diminished. The injections and the lumbar punctures were repeated daily. On the 18th the temperature had been normal for several days, diminishing nystagmus was the only symptom and the patient wished to get up, yet the cerebro-spinal fluid still yielded altered polynuclears and the same cultures. Clinically, suspension of the treatment was indicated but bacteriological examination showed the necessity for its continuance. On the 19th injections of électrargol (a colloid form of silver obtained electrically) were begun. On the 21st, in spite of apparent recovery, the cerebro-spinal fluid was still infected. As experimenters have shown that the colloid metals after injection into the blood are found in all the tissues and media except the cerebro-spinal fluid five cubic centimetres of électrargol were injected into the spinal canal after performing lumbar puncture. After four hours a violent reaction occurred and lasted three hours. It consisted of a rise of temperature to 103·8°, violent headache, and severe lumbar pains, and was accompanied by an abundant excretion of urine. On the following day the patient was very low and the temperature was 99·5°, but the only other symptom was rigidity of the lower limbs. On the 24th the cerebro-spinal fluid was found to be sterile. On the 26th the nystagmus disappeared and the patient got up. This case is noteworthy in several ways. It shows the possibility of meningitis being due to the enterococcus, the curability of the disease, the value of medical treatment, and the latency of infection of the cerebro-spinal fluid.

JUSTICES AND ADULTERATION.

AT the time when so much attention is being directed to gross cases of adulteration of foodstuffs—adulteration which in many cases is proved to be deleterious to the health of the consumer—such a report as that presented to the West Sussex county council at its meeting at Chichester on Nov. 22nd is hardly to be expected. The Sale of Food and Drugs Act committee complains of the "smallness and inadequacy of the penalties inflicted" in cases where proceedings have been taken for adulteration. "The committee," the report says, "desire to draw the attention of the county council that the continuation of their labours is of very little use unless they are supported by the infliction of adequate penalties by the justices in cases of conviction for adulteration under the Food and Drugs Act." The article of food under notice was cocoa—or, rather, sugar, sago, flour, and boric acid—with just a suspicion of the genuine article. But how did the justices deal with two cases of this kind? In one they imposed a fine of 1*s.* and 7*s.* costs, and in the other they mulcted the vendor in 4*s.* 6*d.* costs. Little wonder that the committee included in its report a threat to discontinue to carry out the provisions of the Sale of Food and Drugs Act. In the course of the discussion Lord Zouche spoke very strongly on the matter. He said that "there were many people who thought that half the trouble of disease in this country arose in the first place from this systematic poisoning of the food and drink of the people. This was a detestable crime, and there was no word too strong for it, and the duty of the authorities was, as far as they possibly could, to put down such a very gross and crying evil." Another member suggested the "posting" of convictions after the style of the railway companies, but the "posting" of such penalties as are inflicted in West Sussex would not convey their proper significance to the general public.

THE HAMPSTEAD GENERAL HOSPITAL.

AN adjourned extraordinary meeting of governors of this hospital was held on Dec. 2nd to vote on the report presented by the special committee appointed in July last [1] to consider the proposals of King Edward's Hospital Fund for London with regard to an amalgamation with the North-West London Hospital and a radical change in the constitution of the medical staff. The motion to accept the report was lost by 40 votes to 29, whereupon three of its supporters demanded a postal poll of all the subscribers. This is being taken and we shall publish the result together with an account of the recent meeting at which certain important principles of hospital administration came under consideration.

THE DANGERS OF CELLULOID.

EVIDENCE is not wanting that celluloid is a very dangerous material and its increasing use in the arts and manufactures suggests that the storage of this extremely inflammable substance should be placed under stricter conditions of control than are apparently required at present. A short time ago a serious fire occurred at a factory in Walton-on-Thames in which celluloid was employed for the preparation of kinematograph films. Apparently the fire was started by a film igniting in some way not satisfactorily cleared up, but the ignition of this film was sufficient to involve very rapidly the entire factory in flames. One factory hand failed to make his escape and perished. In the evidence at the coroner's inquiry it was stated that there were no less than 27 miles of celluloid film on the premises at the time of the fire. In spite of the precaution of keeping this very large stock of highly inflammable material distributed in a large number of tins it is quite evident that if fire had reached them an enormous conflagration, if not explosion, would have ensued. As a matter of fact, in the present case, owing to the promptitude and efficiency of the fire brigade, more serious consequences were averted. The existence of such a place in the midst of an inhabited area might surely give rise to well-founded apprehensions as to the risks to which the storage of celluloid on this scale might expose the neighbourhood. One witness, the captain of the fire brigade, when asked whether he considered this factory a private building answered in the affirmative, and it was stated that the premises had not been registered under the Act and that the authorities were unaware of their existence. It seems astounding to us that a factory in which large quantities of an exceedingly inflammable substance such as celluloid are stored and manipulated was ever allowed to be founded in the heart of a residential neighbourhood.

IN order to commemorate his long association with, and the valuable services which he has rendered to, the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury, the medical and surgical staff have placed a marble bust of Dr. J. Hughlings Jackson, F.R.S., the "father" of British neurology, in the hall of that institution. At the presentation, which took place on Nov. 28th, Sir William R. Gowers, the senior physician, on behalf of the subscribers, handed over the bust in a few well-chosen and appreciative remarks. Mr. Frederick Macmillan, the chairman of the board, briefly acknowledged the gift on behalf of the hospital. The bust, which is a very excellent

[1] See THE LANCET, July 20th, 1907, p. 182.

likeness of Dr. Hughlings Jackson, is the work of Mr. Herbert Hampton.

A TELEGRAM from the Governor of the Mauritius received at the Colonial Office on Nov. 29th states that for the week ending Nov. 28th there were nine cases of plague and four deaths from the disease. The Department of Public Health of Queensland, in a bulletin dated Oct. 26th, says that no fresh case of plague has occurred in Cairns and that the outbreak is now at an end. The medical officer of health of the Cape Colony states that for the week ending Nov. 9th no case of plague occurred in King William's Town.

Mr. Joseph Chamberlain, M.P., has been asked by the President of the Liverpool School of Tropical Medicine (Princess Christian) and the chairman of the school (Sir Alfred Jones) to accept the Mary Kingsley medal founded by the school in memory of the late Mary Kingsley for presentation to those who have specially distinguished themselves in the amelioration of health conditions in the tropics, a cause which Mr. Chamberlain personally has so much helped.

THE INAUGURATION OF THE ROYAL SOCIETY OF MEDICINE.

THE FIRST GENERAL MEETING.—THE FIRST VOLUME OF THE PROCEEDINGS.

THE event of the medical week has been the public inauguration of the Royal Society of Medicine. Important meetings of the various sections had already taken place, as many of our columns have testified, but not until this week had any general meeting of the Fellows been held. This first general meeting of the Fellows was held on Tuesday, Dec. 3rd, the President, Sir WILLIAM S. CHURCH, being in the chair. The business was purely formal but the President said that he could not allow the first meeting of the Fellows of the society to go by without making a few congratulatory remarks to those present on its successful commencement. He thanked all concerned for their loyal coöperation and drew particular attention to the services rendered to the society by the secretary, Mr. J. Y. W. MacAlister, to whose energy and business-like capacity the society owed to much, especially a start at a less expense than had been anticipated. Some figures furnished by Mr. Hewitt, the librarian, showed that in 1906 the attendance of readers at the library was 591, whereas in 1907 it was 1150, a fact which showed the important part that the library would be called upon to play in the literature of medicine. Sir William Church concluded by referring to the first volume of the proceedings of the society which has just been issued.

This volume is published by Messrs. Longmans, Green, and Co., under the editorship of Dr. John Nachbar and an editorial committee. The publication is in every way worthy of the society; its *format* is excellent and its type and illustrations are remarkably good. Every Fellow and Member will receive these proceedings as issued and they will form not only a useful but an attractive addition to the practitioner's library, if we may judge from the number before us. The sections are arranged alphabetically and the proceedings of each are independently paged in order to facilitate separate binding, and by cutting the binding threads any section of the number is detachable. These proceedings will be published on the last day of each month from November to July inclusive.

THE INAUGURAL DINNER.

On the evening of Tuesday, Dec. 3rd, the inaugural dinner was held at the Hotel Cecil, under the presidency of Sir WILLIAM CHURCH, who was supported by such a large number of the recognised leaders of medicine in the metropolis and the provinces that it would serve no purpose to give the names.

An excellent dinner was followed by some very serious speaking, the importance of the occasion seeming somewhat to weigh upon the speakers. After the loyal toasts had been drunk, Mr. G. H. MAKINS proposed "The Imperial Services" in a speech which drew its interest from the personal experience of the speaker during the Boer war, for he outlined with some detail what medical organisation in face of the foe really meant. The toast was replied to by Lord METHUEN who spoke with gratitude of the personal services which he had received from the hands of Mr. Makins when wounded, and who paid a tribute that was received with acclamation to the enthusiasm and ability of Mr. Haldane and to the energy of Sir Alfred Keogh in his endeavour to organise a medical department for the Territorial Force. Sir T. CLIFFORD ALLBUTT then proposed the toast of "Science, Art, and Literature," explaining in his usual scholarly manner the intimate relation of medicine to all three. Sir E. RAY LANKESTER, who replied to the toast, disclaimed any intention of responding for anything but science. He pointed out how thoroughly the modern medical man had become a man of science, claiming even for "the bedside manner" its place as a psychological experiment. Alluding to the complete impossibility of medical men knowing and keeping abreast with the details of any other branch of applied science in addition to his own, he pointed out that such intimate familiarity with botany, biology, chemistry, and physics was not expected of them, but only the scientific mind; while he advocated the establishment of a department of medical investigation receiving State support.

Sir WILLIAM CHURCH than gave the toast of the evening, "The Royal Society of Medicine." He said that to the founders of the Medical Society of London in 1773, and especially to Dr. Lettsom, belonged the credit of originating the first medical society in London. The Royal Medical and Chirurgical Society was founded in 1805 and four years later the union of the two was seriously proposed. That union, after due consideration, the Medical Society declined, for much the same reasons that had influenced them now; and although the Fellows and Members of the Royal Society of Medicine very much regretted that they had not the honour of including the oldest of the metropolitan medical societies in their body, he for his part was far from saying that the Medical Society was wrong in its decision. He went on to describe the foundation of other medical societies dealing with various branches of medical science which came into being in London at different dates and said that in 1860, and again in 1868, attempts at amalgamation were made on very much the same lines as those which had now been successfully carried out. The federated society, the Royal Society of Medicine, he said, had now arrived and consisted of 13 federated sections, representing 15 pre-existing societies, and they hoped before long to embrace other sections, so that no branch of medical knowledge should be unrepresented in their society. The number of their Fellows, including those who were elected that afternoon, was upwards of 1800, and of members above 600, and they had every reason to anticipate that those numbers would be considerably increased now that the society was in full working order. The library, which had been strengthened by the inclusion of those of the Odontological and Obstetrical societies with that of the Royal Medical and Chirurgical Society, now consisted of upwards of 70,000 volumes, and in their reading-room no fewer than 89 British and 180 foreign periodicals could be consulted. He thought that the great gathering which he saw there that night fully justified the step which had been taken, and afforded the best augury which they could have for the success of the undertaking, and he was glad to have an opportunity of bearing testimony to the manner in which the various bodies now forming the Royal Society of Medicine were willing to sacrifice somewhat of their independence and individual prestige for the common good. He looked confidently forward to the Royal Society of Medicine becoming a representative body for British medicine to a degree and in a manner which it was not possible for a smaller body to attain.

Dr. NORMAN MOORE followed with the most successful speech of the evening, proposing the health of the guests of the society. He alluded in felicitous terms to the public services of Lord Methuen, Sir E. Ray Lankester, Sir Alfred Keogh, Sir William Collins, and Mr. Sydney Holland, "grandson of Sir Henry Holland as well as chairman of the London Hospital and an authority on hospital management"; he complimented Sir Richard Douglas Powell (President of the Royal College of Physicians of London), Mr. Henry Morris (President of the Royal College of Surgeons of England), and Dr. George Wilks (Master of the Apothecaries Company) on the scientific work done in the

past by the respective and distinguished corporations over which they preside, and humorously affected to perceive that each body had turned out men with a distinct stamp of mind, while he paid a tribute to the endeavours of THE LANCET and the *British Medical Journal* to serve the cause of medicine the generosity of which will be cordially remembered by us. The toast was replied to briefly by Sir William Collins.

An appreciation followed from Sir Richard Douglas Powell of the labours of the chairman, Sir William Church, in connexion with the institution of the society, and the proceedings closed with a graceful attempt on the part of Sir William Church to allot the praise to the honorary secretaries—Dr. A. C. Latham and Mr. H. S. Pendlebury—and especially to Mr. MacAlister, secretary and consulting librarian.

THE PURIFICATION OF THE WATER OF SWIMMING BATHS.

AT first sight the idea of employing time after time the same water in the public swimming bath in spite of a course of purification which that water is supposed to undergo is repulsive. Sentiment at all events is strongly opposed to it but sentiment, of course, does not always take into account plain facts, nor is it always willing to admit the force of scientific evidence. There are few persons we imagine who, if they were given the choice of bathing in water, on the one hand, which was fresh from the main, and water, on the other, which had been bathed in by thousands of bathers would not decide in favour of the former supply, notwithstanding the evidence of scientific examination that the latter supply was maintained in a pure state by a system of treatment by aeration and filtration. As a matter of fact, if it were not that economic considerations were concerned the suggestion to use the same water over and over again would probably never have arisen.

There can be no doubt that the supply of water to public swimming-baths, involving as it does a change being made at least twice a week, is an expensive matter so long as that supply is identical with the water used for drinking purposes. It might be different if the water for supplying the baths were obtained from independent sources. The suggestion, however, that the water could be used again and again and be kept innocent by a system of aeration and filtration has been put to practical test with results so far which appear to show that the water even after a year's use is quite as good as, if not better than, the water which has been kept in the bath at the height of the bathing season for only two or three days without being changed. It can hardly be denied that certain impurities must accumulate which only a powerful purifying process, such as distillation, could remove. We should expect an increase in organic matters represented in the items commonly reported by the analyst as saline and albuminoid ammonia and in the amount of oxygen absorbed; we might anticipate also an increase in chlorides and of other substances known to exist in the products thrown off by the human body. We should expect also to find an increased amount of matter in suspension containing epithelium, hair, and so forth. Further, we should not be very surprised to find that the bacteriological state of the water would grow from bad to worse as the number of bathers increased; provided of course in all these instances that the water was submitted to neither filtration nor aeration. It seems to have been demonstrated, however, that a combined method of efficient filtration and aeration does purify the water to a very remarkable extent and keeps it in a condition of cleanliness not far short of water supplied fresh. We may refer, at all events, to one installation of which we have personal knowledge—namely, that of the Bermondsey Borough Council at the Rotherhithe Baths, which has now been in working order since October, 1906. We learn that similar installations exist elsewhere. The process adopted is one simply of filtration and aeration. The experiment at Rotherhithe has been carefully watched by experts and the results of neither chemical nor bacteriological examination have so far been condemnatory. Chemical examination in particular shows that the aeration process effects some oxidation since the nitrates increase, though it should be added that the figures for albuminoid ammonia and oxygen absorbed were higher in the water after it had been in use from Oct. 28th, 1906, to July 29th, 1907. According to bacteriological examination a sample of water taken after it had been in use for eight months compared favourably with a sample taken when the water had been in use for six months. The total number of organisms present per cubic centimetre was distinctly smaller and both those developing at the air temperature and at the body temperature showed a reduction, the ratio remaining practically the same. From the point of view of a water used for bathing purposes there does not appear to be any objectionable feature about it in the light of chemical and bacteriological analysis. The condition of the water is regarded, in fact, as satisfactory. The results, in short, yielded by the water which had been in use for eight months and duly submitted to the continuous purifying process were no worse than those obtained with a bath water which had been in ordinary use for a short time only but which had not undergone any attempt at purification. The water certainly looked clean and bright and, morever, it is in constant motion. The question remains whether there might be present at some time or other certain harmful impurities which escape detection but that proposition applies equally to water which has been in use for a short time. Any risk referable to bathing in water tainted by an infected person is clearly much the same whether that water is in use for six days or six months, with the difference, however, that in the one case the water is submitted to a continuous purifying process, while in the other it is not so submitted. The question as to whether the use of water over and over again for bathing purposes can be regarded as a hygienic proceeding must depend entirely on the efficiency of the purifying process. At any rate no one can say that the method is ideal and there is always the risk of the purifying machinery failing.

THE MEDICAL TREATMENT OF SCHOOL CHILDREN IN POPULOUS DISTRICTS.

Dr. A. H. HOGARTH, one of the assistant medical officers of the London County Council, who delivered a lecture on Nov. 28th at the Parkes Museum, Margaret-street, London, under the auspices of the Child-Study Society, entitled "The School Clinic," said that it was now universally recognised that medical inspection of schools formed an integral part of every modern system of education and that the lack in this connexion of existing expert knowledge was the reason for the introduction of the medical man. So long as there were in the schools children suffering from preventable and remediable diseases of which both the parents and the teachers were ignorant, so long systematic medical inspection could be justified as a State institution. Nevertheless, medical inspection by itself was insufficient and medical treatment was the natural corollary. Experience had shown that certainly not more than one-third of the ailments and defects of school children discovered by means of inspection in the populous districts of England had been treated or even presented for treatment, while many others had not received material benefit. The question therefore was to find out the best practical means of securing adequate treatment for the more common chronic diseases of children, such as defective vision, carious teeth, and chronic diseases of the ear, throat, and skin. Dr. Hogarth pointed out that the present facilities for dealing with these cases were inadequate. Of course, there were practitioners, hospitals, and dispensaries, but none of these really met the exigencies of the situation. A family medical man was practically unknown in the homes of the poor. General hospitals were unable to cope with the mass of cases and parents could not afford to waste the time involved in waiting with the children at these institutions. Hospitals were not designed to meet the situation that they now had. Dr. Hogarth summarised the impossibility of successfully dealing with the present state of affairs regarding school children by the means now at hand as due to ignorance, apathy and neglect of parents, inadequacy and inaccessibility of existing institutions, real poverty of the people, and the tedious nature of efficient treatment for the chronic cases which formed the bulk requiring attention. The remedy, he said, lay in the establishment of school

clinics or centres for the medical treatment of school children, under the guidance, direction, and control of the education authority. The school clinic should be modelled partly on the special clinics for the treatment of the teeth at Strasburg, Basle, Lucerne, and Zürich, and partly on the lines of the general polyclinics which have been established in Switzerland at Lucerne, La Chaux-de-Ponds, and Neuchâtel. However, as the conditions in these towns differed very widely from those which prevailed in the populous towns of England, the plans for the construction and control of clinics should be modified and adapted to suit English conditions. The proposed clinic should consist of a small building of five or six rooms, a large waiting hall and dispensary, two consulting rooms, one dark room with special apparatus for examining eyes, throats, and ears, and a room for dental and other minor operations. A trained nurse should be in charge under the direction of the responsible medical officer of the education authority. The advantages of a school clinic would be as follows: (1) it would serve as a convenient place for further detailed examination of all children requiring it on and after admission; (2) there would be little interference with school routine; (3) absences of children attending hospital, &c., would be more under control; (4) better accommodation for the work of the school nurse in connexion with parasitic and contagious diseases; and (5) the district school medical man, the school nurse, and the attendance officer could conveniently attend the consultations of the visiting physicians, so that greater coöperation should result.

Mr. J. WILLIS-BUND, the chairman of the meeting, who is also the chairman of the Worcestershire county council, told the audience from his wide experience of schools in both rural and populous districts that in his opinion there would be a considerable amount of difficulty in inducing parents to recognise the need for the inspection of their children. In the discussion that followed the majority of the speakers expressed themselves in favour of a scheme of medical centres for the treatment of school children, although the questions of expense and of wrongful relieving of parents from liability were debated.

BRITISH MEDICAL BENEVOLENT FUND

AT the November meeting of the committee grants amounting to £193 were made to 18 out of 22 applicants. The chairman announced a most generous donation of 100 guineas from a member of the committee to whom the urgent need of help was known. At this time of the year, although the applications are very numerous, practically no subscriptions are received, and the committee appeals most earnestly for donations, so that assistance may be given to the many cases which will have to be dealt with before Christmas. Appended is an abstract of the cases relieved this month.

Wife, aged 62 years, of L.R.C.P. Irel. Was deserted by her husband four years ago through no fault of her own and is dependent for shelter on a widowed friend who can ill afford to help. Earns a few shillings occasionally by needlework. No children. Voted £12.

Daughter, aged 60 years, of late M.R.C.S. No income. Has supported herself for some years as a mission worker, but is now incapacitated by severe neuritis. Voted £10.

Widow, aged 70 years, of L.F.P.S. Glasg. No income. Allowed 3s. 6d. a week by a son. Voted £12.

Widow, aged 40 years, of L.R.C.P., L.R.C.S. Edin. Quite unprovided for at husband's death a few weeks ago. Two children, aged 12 and ten. Voted £12.

Widow, aged 57 years, of L.R.C.P. Edin., M.R.C.S. Eng. Has maintained herself since husband's death ten years ago, but is now practically incapacitated by severe rheumatism and failing sight. Three children, unable to help. Voted £12.

Wife, aged 38 years, of M.R.C.S., L.R.C.P. who is confined in an asylum. Earns small salary as a district nurse but insufficient for the barest necessities required for herself and three children, the youngest only two years old. Voted £12.

Widow, aged 34 years, of M.B., C.M. Aberd. No income; two children, aged eight and seven years. Is endeavouring to obtain employment. Voted £5.

Widow, aged 62 years, of M.R.C.S., L.S.A. No income. Has supported herself as housekeeper, companion, &c., since husband's death 20 years ago but is now unable to obtain another post. Two children, unable to help. Voted £12.

Widow, aged 61 years, of M.B. Edin. Was an annuitant of this Fund. No income; earns about 2s. a week by knitting. Only child very delicate and unable to help. Voted £12.

Daughter, aged 72 years, of late L.S.A. Has maintained herself for several years by taking boarders, but finds increasing difficulty in obtaining them and at present has none. Health indifferent. Relieved once, £12. Voted £12.

L.R.C.P., L.R.C.S. Edin., aged 50 years. Is incapacitated by spastic paraplegia. No income. One child, a school-boy. Relieved three times, £36. Voted £12.

Daughter, aged 55 years, of late M.R.C.S., L.S.A. No income; earns a few shillings a week by needlework. Slight help from friends. Health indifferent. Relieved three times, £32. Voted £12.

Widow, aged 51 years, of L.R.C.P., L.R.C.S. Edin. No income, but has a small uncertain weekly allowance from friends. Seven children, of whom three are just self-supporting, the rest dependent. Relieved once, £12. Voted £12.

Widow, aged 66 years, of L.R.C.P., L.R.C.S. Irel. No income. Friends unable to help. Has maintained herself for several years as a housekeeper, but is now unable to obtain employment. Relieved once, £12. Voted £12.

Daughter, aged 45 years, of late M.D. Edin. Is a governess, but at present has no engagement. Relieved six times, £30. Voted £5.

Widow, aged 52 years, of M.D. Was left quite destitute at husband's death several years ago, after a long illness which exhausted all his savings. Lets lodgings with assistance of only child, a daughter. Relieved seven times, £34. Voted £12.

Widow, aged 85 years, of L.S.A. Was left a widow 50 years ago and supported herself and brought up her family by keeping a school. Has been assisted of late years by a daughter, a widow, whose income is now so reduced that the help cannot be continued. Relieved seven times, £70. Voted £12.

Widow, aged 70 years, of M.D. Lond. No children. Friends all dead. Has a small annuity, but is unable to meet unavoidable expenses. Relieved twice, £16. Voted £5.

MEDICINE AND THE LAW.

The Admissibility of Medical Evidence.

THE object of the statutes in the United States of America which make communications by a patient to a medical adviser privileged, unless such privilege is waived by the protected party, has been held "to save the patient from possible humiliation, not to enable him to win a lawsuit." In the recent case Clifford *v.* Denver, &c., Rio Grande Railroad Company, tried in the Supreme Court of New York, it was held that where a female patient caused a commission to be issued for the examination of her physician she could not object when the defendant offered the deposition in evidence, for she had waived the statutory privilege. Waiving the privilege at one trial precludes setting it up at re-trial, the better opinion being that where a patient voluntarily has forfeited the privacy of the testimony the need of the privilege has been demonstrated to be non-existent. The privilege is also lost by the patient presenting evidence of the communication which is ruled incompetent. Similarly, the professional privilege concerning transactions with a legal adviser is waived by making a sworn statement of the communication before a proper authority and publishing it in a newspaper. In the present case the communication was revealed, hence the object of the privilege, the preservation of privacy, could not be attained and the objection was properly over-ruled.

The Exclusion of Verminous Children from School.

On Oct. 25th the justices of the Stourbridge division upheld the decision of the Worcester education committee in excluding from one of its public elementary schools a child who was suffering from pediculosis corporis. It was alleged by the prosecution that this filth condition was quite preventable, particularly so since the passing of the Cleansing of the Person Act. Further, the condition was contagious and thus dangerous to the well-being of the clean scholars with whom the pediculous child mixed. Section 7 of the Education Act, 1902, compels the education authority "to maintain and keep efficient" all public elementary schools within its area, and this could not be effected if children in a verminous condition were encouraged to attend. The infected child can be excluded for cleansing purposes and the parents will then be liable to a fine for his or her non-attendance.

Compulsory Attendance at a School for Mentally Defective Children.

On Nov. 14th, at Willesden, a father was charged by the Willesden education committee for failing to send his boy, aged 13 years, to the school provided by that authority. The father, while willing that his son should receive regular education, objected to send the boy to a special school for mentally defectives. He alleged that the boy grew worse while in attendance at the school and that he was obviously imitating other scholars who had worse brains than his own: "I have kept him from school wilfully because of the imbecile actions he picked up there," was the father's defence. A medical certificate was produced affirming that the boy was really mentally defective and the bench being

persuaded that such was his condition fined the father 5s. for his son's non-attendance at the school specified.

Nullity of Marriage.

In a recent case of a wife's suit for nullity on the ground of her husband's impotence it appeared that the wife upon being examined was found not to be a *virgo intacta*. In her evidence she stated that she was seduced by another man before she married the respondent and that that accounted for the medical report. The respondent did not appear to the suit and when served with the petition said that he would not defend as he must admit the truth of the allegations contained in the petition. The husband did not submit himself to a medical examination. In her evidence the petitioner stated that the respondent had told her that when a boy of nine he had fallen from a tree and sustained an injury to his genital organs, although at the time it was not known whether the injury was permanent or not. The court granted a decree *nisi*. Incapacity to consummate a marriage is no ground for a decree of nullity unless the incapacity is permanent. If there is a possibility that its cause may be cured the court will not pronounce a sentence of nullity, although such cure may be highly improbable. Impotency not congenital, but temporarily occasioned by excessive self-abuse and therefore capable of being cured, is not a ground for a decree of nullity of marriage. Any evidence is admissible in a suit for nullity which tends to throw light on the cases set up by the petitioner or the respondent; evidence is therefore admissible as to disputes between the petitioner and the respondent during their cohabitation. In a suit of nullity it appears from the husband's evidence that whenever he had attempted to have intercourse with his wife the act had produced hysteria on her part, and that although he had cohabited with her for more than three years the marriage had never been consummated. The wife refused to submit to inspection. On the evidence of the husband the court made a decree *nisi* to annul the marriage. A marriage is void if consummation is practically impossible, although there is no malformation or structural defect rendering consummation physically impossible. Wilful wrongful refusal of marital intercourse is not in itself sufficient to justify the court in declaring a marriage null by reason of impotence. When after a reasonable time it is shown that there has been no sexual intercourse and that the wife has resisted all attempts, the court, if satisfied of the *bona fides* of the suit, will infer that the refusal arises from incapacity and will pronounce a decree of nullity of marriage. As a general rule a decree of nullity of marriage on the ground of malformation will not be granted unless the existence of incurable malformation is proved by a medical man who has examined the person of the respondent. In a suit of nullity by reason of the husband's impotency the surgical report stated that the physical appearances of the wife were such that she might have had regular connexion with her husband during cohabitation. The wife during two years' cohabitation had not complained to her family on this matter and had separated from her husband by reason of his alleged violence. The husband affirmed on oath that the marriage had been consummated. The court declined to pronounce the marriage invalid on the unsupported oath of the party seeking to be relieved from its obligation. From the fact of non-consummation of a *de facto* marriage after a period of cohabitation during which one party made repeated attempts and was always willing and anxious to bring about the consummation of the marriage, the court, notwithstanding the apparent competence of both parties, may draw the inference that something more than seemingly mere wilful refusal must have animated the party who has, in fact, persistently refused to allow consummation. In a case where the petitioner, a widower with children, went through the form of marriage in May, 1893, with the respondent, a widow without children, and lived and cohabited with her at divers places until the latter part of October, 1896, during which time he, being admittedly able and anxious to consummate the marriage, made repeated attempts to do so but was always repelled by the respondent who refused to allow any attempt at connexion, the court, notwithstanding the fact that upon medical inspection the respondent exhibited no structural impediment or signs of virginity, pronounced a decree annulling the marriage upon the ground that it was open to the court to draw from the facts the inference of some latent incapacity on the part of the respondent.

Is Compensation Recoverable for Suicide?

A curious, but at the same time interesting, point came before the Glasgow Sheriff Court. A workman who was blind in the left eye met with an accident to his right eye which consequently made him nearly blind. This so preyed upon his mind that in August, 1907—that is, three months after the accident—he committed suicide. The court dismissed an application by the wife for compensation for his death on the ground that the connexion between the death and the injury was too remote. The report of the case is too brief to enable us properly to judge whether the court was right, for we are not told under what statute the action was brought—whether under the Employers' Liability Act, 1880, or the Workmen's Compensation Act, 1897. It of course could not have been under the new Act of 1906, for the accident happened in May, 1907, whilst that Act did not come into force before July 1st of this year. The question, What is a *proxima causa* or immediate cause? in law is a matter so largely dependent on the facts of the individual case that any formula of the general principle seems unattainable. In Smith *v.* London and South-Western Railway (6 C.P., p. 22) Mr. Justice Blackburn said in the Exchequer Chamber: "If the negligence were once established it would be no answer that it did much more damage than was expected." Although we do not remember any decision in England on the point raised in the Glasgow case there is an American decision very much on all fours with it. In Scheffer *v.* Railroad Company (105 U.S. 249) a passenger was injured by reason of a collision of railway trains in Virginia and becoming thereby disordered in mind and body he some eight months later committed suicide. The statute under which the action was brought was similar to what is known in this country as Lord Campbell's Act, giving the right of recovery when the death is caused by such default or neglect as would have entitled the party injured to recover damages if death had not ensued. The Supreme Court of the United States held in a suit by the personal representatives against the railway company that as his own act was the proximate cause of his death they were not entitled to recover. The court in its judgment, commenting on the difficulty of ascertaining in each case the line between the proximate and the remote causes of a wrong for which a remedy is sought, said: "It is admitted that this rule is difficult. But it is generally held that in order to warrant a finding that negligence or an act not amounting to wanton wrong is the proximate cause of an injury it must appear that the injury was the natural and probable consequences of the negligence or wrongful act and that it ought to have been foreseen in the light of the attending circumstances. Bringing the case before us to the test of these principles it presents no difficulty. The proximate cause of the death of the deceased was his own act of self-destruction. The argument is not sound which seeks to trace this immediate cause of the death through the previous stages of the mental aberration, physical suffering, and eight months' disease and medical treatment to the original accident on the railroad. Such a course of possible or even logical argument would lead back to that 'great first cause least understood' in which the train of all causation ends. The suicide of the deceased was not a result naturally and reasonably to be expected from the injury received on the train. It was not the natural and probable consequence and could not have been foreseen in the light of the circumstances attending the negligence of the officers in charge of the train. His insanity as a cause of his final destruction was as little the natural or probable result of the negligence of the railway officials as his suicide, and each of these are casual or unexpected causes intervening between the act which injured him and his death." If this is the correct expression of the American doctrine it certainly is not in accord with the English doctrine as laid down by Mr. Justice Blackburn in Smith *v.* London and South-Western Railway. If disease is produced by a railway accident and suicide is the result of the disease neither can be looked upon as "casual or unexpected causes." They are both the natural outcome of the injuries arising from the accident. True, to take the latter of them the suicide might be the voluntary expression of the sufferer's despair at his desperate state. In that case there would be the intervention of a conscious agency which diverts the cause of the disease; then there would be no liability on the defendants for an act not necessarily and unaided growing out of their wrongful act. But whether the suicide were the effect of the

disease or whether it were the voluntary act of an at least partially responsible agent would be a matter for a jury to decide. From an English point of view in the former case the defendants would not, and in the latter they would, be discharged.

Looking Back.

FROM

THE LANCET, *SATURDAY*, Dec. 5th, 1829.

ON ANGINA PHARYNGEA.

By WILLIAM TAPLEY, *Esq.*, *M.R.C.S.*

I BEG, through the medium of your valuable publication, to draw the attention of the medical profession to cases of angina pharyngea, terminating in suppuration, and frequently the death of the patient, from suffocation.

It has hitherto been considered a rare disease, but I am persuaded it is of more general occurrence than medical men imagine; and many lives, no doubt, have been lost, from not discriminating this from the other species of cynanche, combined with which I believe it often occurs.

Within the last six months, I have seen two of these cases, in which the medical gentlemen whose care they were under, considered it necessary to perform the operation of bronchotomy. Upon introducing my finger into the back part of the pharynx, I found it very much enlarged, and thought I could perceive a fluctuation. A scalpel was introduced into the tumour, and immediately a large quantity of pus escaped, some of which, of course, passed by the œsophagus into the stomach. I need not add that both patients were immediately relieved, and I have the greatest pleasure in saying they recovered, without a single untoward symptom.

Brompton, near Chatham, Nov. 15, 1829.

INFORMERS.

A Correspondent asks whether apothecaries and chemists can sell powders, having no stamps, without being liable to a penalty? The Commissioners of Stamps have decided that they cannot. A great number of informations have been recently laid, and a conviction for a mitigated penalty has, in each instance, been the consequence. Although saline powders are asked for, and sold, yet they are called soda powders in the informations, and are considered such by the Commissioners.

THE CENTRAL MIDWIVES BOARD.

THE QUESTION OF MEDICAL FEES.

A MEETING of the Central Midwives Board was held at Caxton House, Westminster, on Nov. 28th, Dr. F. H. CHAMPNEYS being in the chair.

A letter was considered from the clerk of the Worcestershire county council forwarding a copy of a resolution adopted by the local supervising authority urging the Board to hold periodical examinations in Birmingham. The Board decided that Birmingham should be constituted one of the provincial examination centres during the pleasure of the Board.

A letter was considered from Dr. E. Rowland Fothergill, honorary secretary to the Wandsworth division of the Metropolitan Counties branch of the British Medical Association, with reference to a circular issued by the Wandsworth board of guardians as to the remuneration of medical practitioners when called in to assist midwives in emergencies. The Board decided that Dr. Fothergill should be thanked for his letter and that he should be informed that the Board is unable to take action in the matter, having no authority over the guardians.

A letter was considered from Mr. W. P. T. Daniel of 273, Cable-street, London, E., forwarding a copy of a resolution adopted at a meeting of medical men residing in the parish of St. George-in-the-East and neighbourhood, declaring their intention, after Nov. 30th, not to proceed to any case of parturition, &c., occurring in the parish on the requisition of a midwife, unless a minimum fee of one guinea is guaranteed either by the guardians or by the Central Midwives Board. The Board decided that a copy of the correspondence should be sent to the Privy Council, pointing out the difficulties and dangers of the situation and suggesting that a copy of the Local Government Board's circular on the subject should be forwarded to every medical practitioner in England and Wales. It was further decided that the Board's action in the matter should be communicated to Mr. Daniel, and that he should be informed that the Board had no power to pay fees in such cases. The circular of the Local Government Board dated July 29th, 1907, referred to in the resolution contains the following:—

> The Local Government Board desire to bring under the notice of the Guardians their views on a question which, as their correspondence shows, has been a source of considerable difficulty to boards of guardians and other local authorities. The Board refer to the question of the payment for medical assistance in those cases where, under No. 18 of the inclosed rules, a midwife has advised that such assistance should be obtained. With regard to this matter the Board may refer to the provisions in Articles 182 and 183 of the General Consolidated Order, where these or similar Articles in other Orders are in force, and also to the enactment in Section 2 of the Poor Law Amendment Act, 1848 (11 & 12 Vict., c. 110). If, where the Articles referred to are in force, the district medical officer attends in cases of the kind above mentioned, he will be entitled to the payments for which the Articles provide, should the woman be actually in receipt of relief, or should the guardians subsequently decide that she was in a destitute condition, although no order for his attendance was given by a person legally qualified to make such order. Moreover, the section alluded to empowers the guardians, "if they think proper, to pay for any medical or other assistance which shall be rendered to any poor person on the happening of any accident, bodily casualty, or sudden illness, although no order shall have been given for the same by them or any of their officers, or by the overseers," and the Board are advised that, under this enactment, it is competent to the guardians to pay the fee of any medical man called in on the advice of a midwife to attend upon a poor person in case of difficulty. The Board would suggest that medical men and certified midwives practising in the Poor-law union should be informed that, in cases arising under Rule 18, the guardians will, on being satisfied that the woman is too poor to pay the medical fee, be prepared to exercise their powers under the section and to pay a reasonable remuneration to the medical man called in. Any such payments should be on a definite scale, which should be suitable to the local circumstances and to the services rendered and which should be duly notified to the local medical practitioners. It appears to the Board that the exercise by boards of guardians in a careful but liberal spirit of their powers under the enactment quoted will furnish a satisfactory solution of the problem to which they have referred and that no reasonable ground of complaint should remain either to the public or to the medical profession. Moreover, general action on the part of boards of guardians in the direction indicated would tend to the preservation of two most important principles which are in danger of being overlooked: first, the responsibility of the husband or natural guardian of the patient to provide for her necessities; and secondly, the right of the guardians to determine who, by reason of poverty, is entitled to medical assistance at the expense of the rates.

A letter was considered from Dr. J. W. Hembrough, county medical officer of Northumberland, as to the payment of fees for medical men summoned in emergencies to cases attended by midwives. The Board decided that Dr. Hembrough should be referred to the Local Government Board as the authority on the matter and that a copy of Dr. Hembrough's letter should be sent to the Privy Council.

Letters from the Under Secretary of State for the Home Department as to the Board's request that the convictions of all certified midwives in police courts should be reported directly to the Board were considered. The Board decided that the Home Secretary's proposal to extend the system adopted for reporting convictions of midwives within the area of the London County Council to the whole of the metropolitan police district, if desired by the other county and county borough councils therein, should be accepted with thanks; and that it should be suggested to the Home Secretary that this system might with advantage be extended to the whole of England and Wales; and that the Home Secretary should be furnished with particulars as to those local supervising authorities who have not complied with Section 8 (5) of the Midwives Act, 1902.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 7653 births and 5085 deaths were registered during the week ending Nov. 30th. The annual rate of mortality in these towns, which had been equal to 14·6, 14 8, and 15·3 per 1000 in the three preceding weeks, further rose to 16·5 per 1000 in the week under notice. During the first nine weeks of the current quarter the death-rate has averaged 15·3 per 1000, the rate in London during the same period being 14·5 per 1000. The lowest death-rates in the 76 towns last week were 8·3 in Newport (Mon.), 9·9 in Hornsey, 10·1 in Birkenhead, 10·3 in Handsworth (Staffs), and 10·8 in Croydon; while

the highest rates were 23·4 in West Bromwich, 23·9 in South Shields, 24·7 in Merthyr Tydfil, 25·9 in Smethwick, and 27·2 in Bootle. The 5085 deaths in the 76 towns last week were 386 in excess of the number in the previous week, and included 424 which were referred to the principal epidemic diseases, against 391, 386, and 397 in the three preceding weeks; of these 105 resulted from measles, 89 from diarrhœa, 82 from diphtheria, 72 from whooping-cough, 42 from scarlet fever, and 34 from "fever" (principally enteric), but not any from small-pox. No deaths from any of these epidemic diseases were registered last week in Huddersfield, Rochdale, Devonport, or in seven other smaller towns; the annual death-rates therefrom, however, ranged upwards to 2·8 in South Shields, 3·0 in West Bromwich, 3·3 in Rotherham, 3·7 in York, 4·8 in Merthyr Tydfil, 4·9 in Burton-on-Trent, and 5·0 in Ipswich. The fatal cases of measles, which had been 76, 73, and 91 in the three preceding weeks, further rose to 105 in the week under notice, the highest death-rates from this disease being 1·1 in Leeds and in Newcastle-on-Tyne, 1·2 in York, 1·4 in Ipswich, 2·1 in Merthyr Tydfil, and 3·9 in Burton-on-Trent. The deaths from diarrhœa, which had declined from 660 to 94 in the nine preceding weeks, further fell last week to 89, and caused death-rates ranging upwards to 1·4 in Ipswich and in Merthyr Tydfil, 1·5 in West Bromwich, 1·7 in Rotherham, and 1·8 in Bury. The fatal cases of diphtheria, which had been 55, 56, and 70 in the three preceding weeks, further increased to 82 in the week under notice; the highest death-rates from this cause being 1·1 in East Ham and 1·9 in Reading. The deaths from whooping-cough, which had been 54, 69, and 76 in the three preceding weeks, declined again last week to 72, and caused death-rates ranging upwards to 1·4 in Ipswich and 1·5 in Warrington. Scarlet fever was proportionally most fatal in West Bromwich, where it caused a death-rate of 1·5 per 1000; from "fever," the highest annual rate of mortality last week was 1·2 in York. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 5689 and 5686 at the end of the two preceding weeks, had further declined to 5676 at the end of last week; 623 new cases were admitted during the week, against 667, 636, and 597 in the three preceding weeks. The deaths in London referred to pneumonia and other diseases of the respiratory system, which had been 204, 251, and 298 in the three preceding weeks, further rose to 388 last week, but were 50 below the corrected average number in the corresponding period of the five years 1902–06. The causes of 48, or 0·9 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leeds, Bristol, West Ham, Hull, Newcastle-on-Tyne, Nottingham, Leicester, and in 49 other of the 76 towns; ten uncertified deaths were registered in Birmingham, nine in Liverpool, six in South Shields, three in Sheffield, and two each in Manchester, Bradford, West Bromwich, and Bootle.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 15·3, 15·9, and 16·7 per 1000 in the three preceding weeks, further rose to 19·3 per 1000 in the week ending Nov. 30th, and was 2·8 per 1000 above the mean rate during the same period in the 76 large English towns. Among these Scotch towns the death-rates ranged from 12·9 in Paisley and 13·7 in Aberdeen, to 24·0 in Perth and 26·1 in Dundee. The 671 deaths in these eight towns last week were 92 in excess of the number in the previous week, and included 111 which were referred to the principal epidemic diseases, against 74, 79, and 75 in the three preceding weeks. These 111 deaths were equal to an annual rate of 3·2 per 1000, or 1·8 per 1000 more than the death-rate last week from the principal epidemic diseases in the 76 large English towns; they included 43 which resulted from measles, 36 from diarrhœa, 23 from whooping-cough, five from cerebro-spinal meningitis, two from scarlet fever, and two from enteric fever, but not any from small-pox or from diphtheria. The fatal cases of measles, which had been 33 in each of the two preceding weeks, increased last week to 43, of which 23 occurred in Glasgow, 17 in Dundee, and two in Greenock. The deaths from diarrhœa, which had been 11 and 16 in the two preceding weeks, further rose to 36 in the week under notice, and included 17 in Glasgow, 11 in Dundee, two in Aberdeen, and two in Greenock. The fatal cases of whooping-cough, which had been 12 in each of the two previous weeks, rose last week to 23, of which 10 occurred in Glasgow, three in Edinburgh, three in Dundee, three in Leith, and two in Greenock. The deaths attributed to cerebro-spinal meningitis, which had been five and four in the two preceding weeks, numbered five last week, and included four in Glasgow and one in Paisley. The deaths in the eight towns referred to diseases of the respiratory system, including pneumonia, which had been 93, 104, and 106 in the three preceding weeks, further rose to 137 in the week under notice, but were eight below the number in the corresponding period of last year. The causes of 24, or 3·6 per cent., of the deaths in these eight towns last week were not certified; in the 76 English towns the proportion of uncertified deaths did not exceed 0·9 per cent.

HEALTH OF DUBLIN.

The annual rate of mortality in Dublin, which had been equal to 22·8, 21·4, and 18·4 per 1000 in the three preceding weeks, rose again to 21·6 per 1000 in the week ending Nov. 30th. During the first nine weeks of the current quarter the death-rate has averaged 20·7 per 1000, the rate during the same period being 14·5 in London and 13·3 in Edinburgh. The 162 deaths of Dublin residents registered during the week under notice were 24 in excess of the number in the previous week, and included four which were referred to the principal epidemic diseases, against 12, 11, and 10 in the three preceding weeks; they included three from diarrhœa and one from whooping-cough, but not any from small-pox, measles, scarlet fever, diphtheria, or "fever." These four deaths were equal to an annual rate of 0·5 per 1000, the death-rate last week from the principal epidemic diseases being 1·3 in London and 0·8 in Edinburgh. The fatal cases of diarrhœa, which had been four, three, and seven in the three preceding weeks, declined again last week to three. The 162 deaths from all causes included 38 among children under one year of age and 56 among persons aged upwards of 60 years; these numbers were respectively 11 and 20 in excess of the corresponding figures for the previous week. One death from violence and three inquest cases were registered; and 62, or 38·3 per cent., of the deaths occurred in public institutions. The causes of nine, or 5·6 per cent., of the deaths registered in Dublin last week were not certified; in London only one death was uncertified, while in Edinburgh the proportion was 5·9 per cent.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

IN accordance with the provisions of Her late Majesty's Order in Council of April 1st, 1881, Fleet-Surgeon George Hewlett has been placed on the retired list at his own request (dated Nov. 29th).

The following appointments are notified: Fleet-Surgeon D. J. P. McNabb to the *Prince George*. Staff-Surgeon P. H. Boyden to the *Devonshire* as acting interpreter in French.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel Alfred O. Geoghegan retires on retired pay (dated Dec. 4th, 1907). Major Joseph I. P. Doyle, from temporary half-pay, is retired, receiving a gratuity (dated Dec. 1st, 1907).

Lieutenant-Colonel H. J. Wyatt has been selected to succeed Lieutenant-Colonel W. J. Baker in the charge of the military hospital at Arbor Hill, Dublin.

VOLUNTEER CORPS.

Rifle: 2nd Volunteer Battalion, the Royal Warwickshire Regiment: Charles James Izzard Krumbholz to be Surgeon-Lieutenant (dated Oct. 13th, 1907). 3rd Glamorgan Volunteer Rifle Corps: Surgeon-Captain A. L. Jones to be Surgeon-Major (dated Oct. 16th, 1907). 2nd Volunteer Battalion, the Loyal North Lancashire Regiment: Surgeon-Lieutenant J. Woods to be Surgeon-Captain (dated Oct. 23rd, 1907).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

Eastern Command: Woolwich Companies: Lieutenant-Colonel C. H. Hartt is granted the honorary rank of Colonel (dated Oct. 16th, 1907).

THE ROYAL NAVY EXAMINATION FOR COMMISSIONS AS SURGEONS.

The following is a list of successful candidates at the recent examination for commissions as surgeons in the Royal Navy. Two of the candidates held University degrees:—

	Marks.		Marks.
G. Carlisle	1542	H. H. Babington	1110
G. T. Verry	1437	W. C. Carson	1109
G. B. Scott	1326	J. H. Wright	1090
F. H. Holl...	1320	C. H. L. Petch	1060
G. P. Adshead...	1285	G. A. S. Hamilton... ...	1045
J. McCutcheon	1265		

MILITARY MEDICAL ORGANISATION.

A correspondent writes:—"The organisation of the medical branch of an army on active service presents numerous problems which military surgeons are trying to solve by the light of the information afforded in recent wars. Unfortunately, that information is still inadequate, but it is nevertheless complete enough to enable principal medical officers to say to supreme commanders, 'Give us working plans of the projected operations and we will supplement them with sufficient medical aid.' Military tactics in the face of an enemy must include medical arrangements, but these cannot be properly evolved from the darkness of ignorance and conjecture. In the past commanders of armies have almost always ignored the demands for information of their medical subordinates and the consequences have invariably been disastrous. It would be easy to cite chapter and verse but the facts are so notorious that detailed proof would be superfluous. It is lamentably true, however, that prejudice is deeply ingrained in human nature and more especially so in military human nature. Men accustomed to exact, or give, unquestioning obedience are prone to resent what they regard as interference with their prerogative. Their upbringing and education unfit them for submission to guidance, even in matters with which they admit that they are only imperfectly acquainted. The efficiency of the fighting unit being now more than ever the most important factor in warfare it is absolutely necessary that commanders should take to heart the lessons so legibly inscribed upon the records of the memorable war between Russia and Japan. In view of the magnitude of the subject it is not too much to say that any commander convicted of wilfully ignoring these lessons in the future should be arraigned for high treason. During 18 months the Japanese forces lost 8·4 per cent. of their strength from wounds incurred in action, whereas the losses from disease (or what are called natural causes) during the same period amounted to no more than 3·3 per cent. In a recent work by Dr. J. J. Matignon, who was an eye-witness, these marvellous figures are thus accounted for: 'This unprecedented result is due in the main to the excellent hygienic precautions which were formulated by the Japanese medical officers, and scrupulously observed by all ranks from the highest to the lowest in the military hierarchy; from the Field Marshal in supreme command down to the humblest sapper with no subordinates but the enemy.' It is true that Manchuria, the theatre of the war, has a salubrious climate, but this in no wise detracts from the triumph of the sanitarians. The climate of South Africa is likewise excellent, and yet during the Boer war the inefficiency due to disease enormously exceeded that due to battle. In the Japanese army the destructive giants of previous warfare were cut down to pigmies. For the first time on record the most deadly foe was the enemy. Amongst the Japanese the most formidable disease was beri-beri. Dysentery, which has always been accounted one of the principal curses of campaigns, was in this instance almost completely subjugated by the Japanese surgeons who saw that every man took a daily dose of creosote. Typhoid fever, the heretofore dreaded decimator, scarcely showed itself at all. The hygienists, for the first time in military history, were given a free hand and saved their country thousands, nay, tens of thousands, of lives. Every Japanese soldier carried a manual of hygiene. It was not much of a burden but its value was colossal. The men understood what was laid down in it as well as they did their musketry instructions. When the war was over 800,000 soldiers were taken back to their country, but before landing all were efficiently disinfected. From general to bugler, from correspondent to camp follower, not a single individual was permitted to enter Japan until both he and his belongings had been thoroughly aspticised."

QUEEN ALEXANDRA'S MILITARY HOSPITAL.

In order to utilise the clinical material of the Queen Alexandra's Military Hospital the Army Council is associating the hospital with the Royal Army Medical College, as a part of the medical school, for the post-graduate instruction of officers of the Royal Army Medical Corps. The assistance of acknowledged leaders of the civil medical profession as consultants in medicine and surgery was also determined upon and the following appointments have been approved:—To be consulting physicians: Dr. W. Osler, F.R.S., F.R.C.P., Regius professor of medicine, University of Oxford; Dr. J. Mitchell Bruce, F.R.C.P., consulting physician, Charing Cross Hospital; Dr. J. Kingston Fowler, F.R.C.P., physician to Middlesex Hospital. To be consulting surgeons: Mr. A. E. Barker, F.R.C.S., professor of surgery, University College of London; Mr. A. A. Bowlby, C.M.G., F.R.C.S., surgeon to St. Bartholomew's Hospital; and Mr. G. H. Makins, C.B., F.R.C.S., surgeon to St. Thomas's Hospital.

NEW BRANCH OF THE RED CROSS SOCIETY.

On Nov. 30th Lady Londonderry presided at a meeting held at Stockton-on-Tees for the purpose of establishing a Durham County Branch of the British Red Cross Society. Sir Frederick Treves, Bart., G.C.V.O., C.B., said that since the parent society was formed in 1870 nearly £500,000 had been spent in relieving the sick and wounded in times of war and during the South African war a sum of £162,000 had been spent.

Brigade Surgeon-Lieutenant-Colonel David D. Cunningham, C.I.E., retired pay, Indian Medical Service, has been appointed an honorary physician to the King, vice Surgeon-General Sir J. Fayrer, Bart., K.C.S.I., deceased.

Correspondence.

"Audi alteram partem."

FORMIC ACID AND THE FORMATES.

To the Editors of THE LANCET.

SIRS,—It has been said of books, and it might be applied as truly to drugs, that there are already more good ones than a man could master in a lifetime, and that the bad, the indifferent, and for the most part the new, should therefore be shunned. Nevertheless the laboratories, like the publishing houses, ignore the doctrines of Malthus and, as if their products still failed to meet the demand, there are those who would redeem from the archives of dead centuries formulæ consigned to unmerited oblivion. Prominent amid these resurrections is decoction of ants, which was supposed to transmit to its consumers the energy and endurance of the insect, and for its revival as an internal remedy (in the guise of formic acid) we are indebted to Dr. Clement of Lyons. His articles, published in the *Lyon Médicale* in 1903 and 1905, started in France the vogue for formate medication which is now spreading to this country. These articles make brave reading. According to Dr. Clement formic acid, through its power of increasing the activity of muscle, striped or unstriped, is a veritable specific for neurasthenia, "adynamia," senile weakness, and allied conditions. Nor is its influence restricted to this field, for with the power of sustained and magnified effort and of resistance to fatigue it promises the cure of heat or thunderstorm lassitude, morning drowsiness, craving for stimulants, indolence, ergophobia, and lotus-eating in general! What visions of the solution of hitherto baffling problems—the jibbing horse, the reluctant ass, the "casual," the "chronic," the Irish "congested district"! And how simple!

Some years ago an article by another French physician, Dr. M. de Fleury, entitled "A Cure for Indolence," appeared in the *Fortnightly Review*, but his cure resolved itself into mere counsels of perfection—strict regulation of the 24 hours, easily digested food, abstention from alcohol, regular sleep, massage, exercises, the implanting of good "fixed ideas," and so forth.

And Dr. Clement?

"Go to the ant thou sluggard—and eat her! ....."

But to come to my point, there occurred to me lately another consideration of myrmecophagy: What of the ant-eating beasts, birds, insects, are *they* characterised by the restless activity of their prey? Let us take the great ant-eater (M. jubata) of South America, until recently to be seen at the Zoological Gardens of London. Was there a sleepier beast to be found in the collection? An uncouth creature,

whose wont it was to doze through long hours, wake to stump about for a few painful minutes on the back of its wrists, and then to slumber again! Nor are the ant-birds (formicariidæ) much better. They are given to skulking in thick bushes and are noted for their weak powers of flight. As for the so-called ant-lion (myrmeleon), its one output of energy is devoted to forming its pit and the rest of its larval life is spent in squatting at the bottom waiting for ants to perform the Strange Ride of Morrowby Jukes into its mouth. It is true that in Australia two ant-eaters are found of a somewhat more active habit, the porcupine ant-eater (echidna), which, among other strange attributes, lays eggs, and a marsupial (myrmecobius fascialis), which is said to exhibit a squirrel-like agility in the trees. But then Australia is the land of black swans. Lastly, in South Africa is found the aard vark (orycteropus) which displays a ghoulish address in unearthing its repasts. But a salient characteristic of most quadruped ant-eaters, at any rate, is, that following their stimulating meal they promptly turn in and sleep the clock round.

These reflections, together with the fact that the strychnine salt has now boarded the formate omnibus, even as it has crept into the vehicles of the hypophosphites and glycerophosphates, lead me to suspect that Dr. Clement has let his enthusiasm overpower a little that fineness of scientific perception for which our French colleagues are famous. In fact, I might be tempted to quote La Fontaine—

> " ..... de toutes les merveilles
> Dont il étourdit nos oreilles
> Le fait est que je n'y vois rien "—

were it not that in a case of advancing heart failure I found formic acid of undoubted value as an alternative to digitalis and theocine sodium acetate in maintaining renal activity and averting anasarca.

On the other hand, in a case of prolonged post-influenzal heart weakness which I described in conjunction with Dr. Black Jones of Llangammarch in a recent number of THE LANCET[1] I gave it a thorough trial and found it of no value whatever, possibly owing to the low blood pressure (110 millimetres Potain) present. In cases of neurasthenia and allied conditions I have not been able to persuade myself that the formates materially hastened recovery; certainly I have not found it the "diacatholikon" heralded by Dr. Clement. Perhaps some subscribers of THE LANCET have had more favourable experiences.

I am, Sirs, yours faithfully,

Hampstead, N.W., Dec 2nd, 1907. J. S. MACKINTOSH.

PS.—In "Dr. Harper's Medical Dictionary" (seventh edition, 1839), under the heading, "Formic Acid," is the comment: "It has not yet been applied to any use." But just below, under "Formica Rufa," is this remark: "The chrysalides of this animal are said to be diuretic and carminative and by some recommended in the cure of dropsy." This, of course, bears out my own observation of formic acid as a diuretic. It is said that in Morocco lethargic patients are given ants to swallow (Leared, Morocco and the Moors, quoted by Frazer), but it is not recorded whether the ants' juice or the action of their nippers on the œsophageal mucous membrane provides the desired stimulus. Certainly the remedy is not used by the court physicians of that country; or perhaps, like others, they have found the administration disappointing.

THE NEEDS OF LONDON MEDICAL STUDENTS.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Nov. 30th, p. 1567, "M.B., L.R.C.P." writes that I make "a very common error" which should be corrected when I state that "the Conjoint Board can at any time help its diplomates to obtain the title of 'doctor' by which he presumably means the degree of M.D." Now I scarcely think it fair for your correspondent to accuse me of error, and attempt to correct it, solely upon a presumption of his own. My letter was quite clear. I neither suggest nor do I mean M.D. No Act of Parliament is required. A man who is a physician and a surgeon *is* a doctor and the Conjoint Board can and ought to *authorise* him to use that title.

I am as jealous of degrees as "M.B., L.R.C.P." can be, and only men who are entitled to M.D. should be allowed to sign themselves as such. If an M.R.C.S., L.R.C.P. of London is not a "doctor" in the opinion of your correspondent, he certainly is to an educated layman whose opinion in such a matter is not to be despised.

I am, Sirs, yours faithfully,

R. DENISON PEDLEY, F.R.C.S. Edin., L.D.S. Eng.

London Bridge, S.E., Nov. 30th, 1907.

[1] THE LANCET, Nov. 23rd, 1907, p. 1460.

To the Editors of THE LANCET.

SIRS,—Sir William Gowers says that fruitless efforts have been made before to get the Conjoint Board to grant us a degree but it seems to me that these efforts have failed because there was a lack of unity, and I believe if we Conjoint men could show the Board that we are united, as well as determined to get this very reasonable concession, I do not think they would, or could, turn a deaf ear to our entreaties. The question arises, How could we show a united front? Well, it would be impossible to hold a large meeting, say, in London, for we are in practice and far away from London and naturally could not attend it; therefore, it seems to me that the only solution of the difficulty is to take a plebiscite of all the practitioners—University and Conjoint men—and present the result of the vote to the Board; but how are we to distribute the voting papers? Here, again, I think the only way would be to ask the two leading medical journals—THE LANCET and *British Medical Journal*—kindly to allow us to inclose the voting paper in each of their issues and ask the practitioners to return same, say, to a central depôt, where the counting could take place and the result published in due course, which result, I humbly suggest, ought to be presented to the Board by Sir William Gowers, Dr. F. J. Smith, and others, who have taken so much interest in our cause. This would mean a little expense, but I am sure those practitioners who have our cause at heart would willingly contribute a small sum for the sake of banishing this injustice. I am, Sirs, yours faithfully,

Nov. 30th, 1907. A CONJOINT MAN.

To the Editors of THE LANCET.

SIRS,—A storm in a teapot! If London cannot grant the M.D. degree the student can by attending a provincial university supply his wants. Even if the Royal Colleges acquire the power the university stamp will be wanting. Application to a good colonial university for honorary M.D. or for M.R.C.S. & P. will solve the question. Such will carry greater weight and be more dignified than the rush to continental universities for degrees, which degrees carry no weight in their own countries so how can they be well thought of here? A rush for the provincial universities will soon make the London examiners seek to correct defects. It is said the tender spot on the Yankee is to touch his dollars. The world is pretty well akin. No dollars to examiners and there will be a grand hustle for a medical degree for London students. So mote it be.

I am, Sirs, yours faithfully,

Nov. 29th, 1907. A TORONTO AND NEW YORK GRADUATE.

THE LONDON PROVIDENT DISPENSARIES' COUNCIL.

To the Editors of THE LANCET.

SIRS,—It must be very gratifying to all those who have for a long time written and striven with a view to the formation of a road which might lead to the decrease of the many evils of the present misuse of our metropolitan out-patient departments to read your able editorial note to the letter under the above heading from "An East-End Practitioner" which appeared in your issue of Nov. 23rd, p. 1497. Your correspondent has not, I fear, sufficiently studied the subject to be aware of the advantages which he and other medical practitioners, both in the East-end and other parts of London, could derive by the establishment of well-conducted provident dispensaries or medical services all over the metropolis.

It might be well to remind "An East-End Practitioner" that so long ago as 1871 at a meeting of 156 members of his profession, among whom were many eminent men, both consultants and general practitioners, with Sir William Fergusson, Bart., F.R.S., in the chair, the following motions were passed:—

1. That this meeting is of opinion that there exists a great and

increasing abuse of outdoor relief at the various hospitals and dispensaries of the metropolis which urgently requires a remedy.

2. That in the opinion of this meeting the evils inseparable from the system of gratuitous medical relief administered at the outdoor department of hospitals and in free dispensaries can be in great measure met by the establishment, on a large scale, of provident dispensaries, not only in the metropolis, but throughout the kingdom, and by improved administration of Poor-law medical relief.

I am, Sirs, yours faithfully,

E. MONTEFIORE,
Lieutenant-Colonel;
Secretary, Medical Advisory Committee, Charity Organisation Society, and a Member of the London Provident Dispensaries' Council.

London, S.W., Nov. 28th, 1907.

THE REFORM OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—As a Member of the Royal College of Surgeons of over 57 years' standing, and having no axes of my own to grind, perhaps I may be pardoned for sending a few words on the subject discussed in THE LANCET of this week on the representation of the Members of the College on its Council. My thoughts have often been directed to this matter in former years, but I have had the feeling that the general action of the Council in the management of the College and its affairs was satisfactory. I do not imagine that the admission of a few representative members of the great body of the profession would make any very great difference in the actions of the Council, either for good or otherwise. It would, however, have a useful influence in curbing or moderating agitation, and would probably give satisfaction to the wiser heads of the larger body. Moreover, it would be in some sense an acknowledgment of the service rendered to the College by the considerable funds which come to it through the medium of the general mass.

It would, however, be an evil day that saw the election to the Council of the College thrown open to all its Members. Our best men would rarely be found willing to stand for a contested election. It would completely swamp the highest intelligence and introduce plausible agitators, and a much inferior body of men. I have always held these opinions and perhaps this is not an unsuitable time for their expression, and I may hope for pardon from those who think differently, on the score of my longevity.

I am, Sirs, yours faithfully,

Huddersfield, Nov. 30th, 1907. SAMUEL KNAGGS.

A CASE IN WHICH THE RETURN OF HAIR TO ITS NORMAL COLOUR WAS ASSOCIATED WITH TREATMENT BY HYPNOSIS.

To the Editors of THE LANCET.

SIRS,—So little is known of the changes that may occur in the colouring of the hair that the following case in which the colour varied in an extraordinarily short space of time may be of interest. A few months ago a single woman, about 43 years of age, came to me to be treated for mental depression. Six months previously she told me she had had a severe attack of pneumonia and ever since her recovery she had been intensely depressed. She had had two similar attacks of depression before, both brought on by mental shock. When I first saw her she was intensely depressed and thought that "God had turned His face from her"; this, however, she only told me after her recovery. Her sister told me that she had not laughed for six months. But the extraordinary feature of the case is that both in this and in her previous attacks her hair, which on her head is naturally a dark auburn and on her arms quite fair, had turned quite black. When she recovered from her previous attacks her hair had recovered its natural colour, she told me. I hypnotised her lightly on a Monday for the first time and told her to come again on the Wednesday, and on that day she was much better as regards her depression, but what struck me most was that her hair was fairer. To make a long story short, she was hypnotised in all six times in ten days and at the end of that time not only was her depression gone entirely but her hair had returned to its normal colour. The hair on her arms was then so fair as to be invisible at a short distance. I can find no record of any similar case. The case was interesting in one other point. She had suffered for many years from chronic constipation. This yielded to suggestion, though the only sign of hypnosis obtainable was that she could not open her eyes when told she could not do so. It is, of course, well known that constipation can in many cases be cured by suggestion, but I do not think it is generally realised how very slight the degree of hypnosis is that is required for effecting the cure. As regards the change of colour in the hair, I can find no literature bearing on the subject. Whether it was due directly to the nervous system or indirectly to some change in the constituents of the sweat I have no idea.

I am, Sirs, yours faithfully,

H. E. WINGFIELD.

Queen Anne-street, Cavendish-square, W., Nov. 29th, 1907.

DRAINAGE OF THE UTERUS IN PUERPERAL INFECTION.

To the Editors of THE LANCET.

SIRS,—While congratulating Dr. A. A. Warden on his successful treatment of the case he records I cannot altogether accept his argument. I do not think it necessary to assume that there was blocking of the cervix, except possibly on the one occasion when for 12 hours there was no vaginal discharge whatever. There will usually be a residuum of discharge in a flabby, septic uterus and the use of a drainage tube may not completely prevent this. Packing would, but this is contraindicated, as it may cause still further mixing of the infection. The treatment which suggests itself for such a complication is the application of a firm abdominal binder, gentle kneading of the uterus, posture, such drugs as quinine and ergot, with occasional doses of aloes, and uterine douching followed by drying of the cavity of the uterus. Intra-uterine douching, while necessary, is never the whole treatment of such cases. The rigor and rise of temperature following irrigation require explanation and prevention. The cause, I believe, is the solution of ptomaines and toxins by the water left in the uterus after douching and their rapid absorption. Packing obviates this. On each occasion when packing was used by Dr. Warden after douching there were no such symptoms. But I contend that the packing need not have been left in the uterus. Simple drying of the uterus with iodoform gauze after each douche would have sufficed.

My own practice, as described in THE LANCET of Oct. 31st, 1903, is, after douching, to express the remains of the solution without removing the uterine catheter and to complete the removal of all water by injecting an ounce of glycerine and formalin, 3 per cent., which retards further absorption of the toxins and also acts as a powerful antiseptic.

I am, Sirs, yours faithfully,

Glasgow, Nov. 28th, 1907. DAVID WATSON.

A PROTEOLYTIC FERMENT IN THE SALIVARY SECRETION.

To the Editors of THE LANCET.

SIRS,—In applying the method of Dr. P. T. Hald[1] of Copenhagen for determining the proteolytic activity of solutions of the pancreatic and other ferments, experiments kindly undertaken for me by Mr. F. W. Gamble show that ptyalin liquefies gelatin solution. Hitherto, so far as I am aware, the presence of a proteolytic ferment in the salivary secretion has not been demonstrated.

I am, Sirs, yours faithfully,

J. A. SHAW-MACKENZIE, M.D. Lond.

London, Dec. 3rd, 1907.

THE RECENT MEETING OF FELLOWS AND MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—In your article on this meeting you say "It has been reserved for a Member to accuse the President of uttering an untruth." Doubtless these remarks apply to me. I did not intend to convey any such meaning and that I

[1] Comparative Researches on the Tryptic Strength of Different Trypsin Preparations and on their Action on the Human Body, by P. Tetens Hald, M.D., THE LANCET, Nov. 16th, 1907, p. 1371.

stated at the meeting. What I wished to convey was that the remarks in the annual report that the Members if elected on the Council would turn it into a socio-political affair were untrue and a libel on the Members of the College. The Members have as much desire to sustain the honour and dignity of the College as the Council.

I am, Sirs, yours faithfully,

JOSEPH SMITH, M.R.C.S. Eng. & D.P.H. Camb., J.P.

Wellesley-road, Gunnersbury, W., Dec. 3rd, 1907.

THE MEDICAL INSPECTION OF SCHOOL CHILDREN.

To the Editors of THE LANCET.

SIRS,—The recent circular from the Board of Education deals with matters of so great importance that I shall be grateful if you will allow me space to call attention to one or two points which you did not touch upon in your leading article. It may be as well to recall the inception of the circular before dealing with the points in question.

Last summer there passed through Parliament a Bill now known as the Education (Administrative Provisions) Act, 1907. Section 13 of this Act deals with the question of medical inspection, and its provisions were published at p. 1555 of your issue of Nov. 30th in the abstract of the circular referred to below. More or less coincidently with the passage of this Act the Board of Education determined upon the creation of a medical department and in THE LANCET of Sept. 21st a circular from the Board was published notifying the appointment of a President for this Board and stating that in the autumn the Board would issue a circular to local education authorities "regarding their new duties in the matter of the medical inspection of school children." The section of the Act with which the circular in question deals comes into force on Jan. 1st, 1908, so that between the date of the circular, Nov. 22nd, and the beginning of next year there remain nearly six weeks during which its provisions may be considered—a period none too long when the importance of the duties laid upon education authorities and the wide-reaching nature of the same be considered. It is all very well to make regulations and to express aspirations, but the carrying out of regulations is a different matter from their formulation, and by far the most important portion of the circular is that which deals with the administration of the clauses of the Act in question. The function of the Board of Education is to advise local education authorities as to the manner in which they should carry out the provisions of the Act, and the circular lays down that the work of medical inspection should be carried out in intimate conjunction with "the public health authorities and under the direct supervision of the medical officer of health." Reference to your abstract of the provisions of the circular will show that the administration of the Act is to be in the hands of county councils, town councils, and urban and rural district councils which are local authorities for elementary education; the last named are advised to make arrangements for the purpose either separately or in combination. These bodies should be capable of doing the work which is set before them if they are willing to carry out the task. But there does not appear to be any provision for compelling local health authorities to do their duty, and recent events have shown that there are health authorities who are by no means willing to carry out their duties as guardians of the health of the community which has elected them. Your readers will have no difficulty in calling to mind instances of neglect, examples of which are constantly made public in the reports of the medical inspectors of the Local Government Board, but although the British nation as a whole agrees with the Sussex motto, "Wunt be druv," when the national health is in question it is as well to have a little driving power behind the recommendations and opinions of a Government departmental circular, and it may be that at some future time the control of matters dealing with the public health will have to be taken out of the hands of popularly elected bodies.

Another point to which I desire to draw attention are the directions contained in Sections 10 to 13 inclusive of the circular. Section 10 states that the directions given in the circular as to the degree and frequency of inspection refer only to the minimum medical inspection. Section 11 sets forth a schedule for examination which to carry out properly would occupy at least an hour; and Section 13 says in Subsection (*a*): "The examination of each child need not as a rule occupy more than a few minutes." These two Sections appear to me to be incompatible. On the whole the Board of Education seems to have honestly tried to deal, in part, with a most important and difficult matter in a thorough manner, although two cardinal matters are, as you stated, dealt with very delicately. The one is the question of following up cases of illness or defect and the other is the question of treatment. As to the success of the movement, so far as it goes, everything depends upon how the local authorities discharge the task which it is wished that they should carry out. Moreover, no provision is apparently made for any payments to the medical men and the matter of expense will probably be the rock upon which many local authorities will go to pieces, for the question of hygiene is in many cases the very one upon which local authorities are unable or unwilling to see the necessity of spending money.

I am, Sirs, yours faithfully,

Dec. 2nd, 1907. M.D.

To the Editors of THE LANCET.

SIRS,—Some expression of opinion in the columns of THE LANCET as to the proper remuneration for this work would be of great assistance to many a medical officer of health in small districts, where the local authority is as a rule only too ready to impose additional duties upon its officers without any commensurate payment.

I am, Sirs, yours faithfully,

Nov. 30th, 1907. AN ILL-PAID M.O.H.

*** The important question raised in this letter has been present to our minds ever since we read the memorandum of the Board of Education. The action of the Board of Education will probably lead either to the appointment of assistant medical officers of health or to the engagement of practitioners as inspectors on a part-time basis according to the population of the area. In the case of the medical officer of health there will be remuneration independent from the salary as medical officer of health, a principle which has already been recognised. We are not in a position to say anything more definite as yet, but we believe that both the Board of Education and the Local Government Board are fully aware that a payment scheme will have to be arranged and are prepared to act fairly towards the medical profession in the matter. We must trust to practitioners to give us their help when we seek it if the question is not satisfactorily dealt with.—ED. L.

THE ARMY AND NAVY MALE NURSES' COÖPERATION.

To the Editors of THE LANCET.

SIRS,—As one who has frequent occasion for the employment of male nurses may I ask the reason for the continued delay in the establishment of this much-needed institution? There are hundreds of former R.A.M.C. men walking about the streets who might get employment easily, as they are willing to take lower fees than those charged at the existing institutions. Why should the proposed coöperation be placed upon an eleemosynary basis at all? What do Sir Frederick Treves and Dr. Howard Tooth want £2000 for? I will undertake to say that not one of the associations which can now afford to advertise themselves so liberally started with a capital of £2000 or even £200. Surely there is credit enough behind the scheme to take and furnish a small house in a central position; nothing more is required, the coöperation would pay from the first, as no doubt official patronage could be obtained. I am, Sirs, yours faithfully,

Nov. 29th, 1907. W. G. D.

LONG SERVICE OF A POOR-LAW MEDICAL OFFICER.—At the meeting of the Thornbury (Gloucestershire) board of guardians held on Nov. 29th the resignation of Mr. Edward Mills Grace, M.R.C.S. Eng., L.R.C.P. Edin., the well-known cricketer, as district medical officer and medical officer to the workhouse was accepted with regret. Mr. Grace has held the appointment for 40 years and will be granted a superannuation allowance.

THE HOUSING PROBLEM AT HAMBURG.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

PART I.

FROM July, 1892, to December, 1894, it was my special mission to investigate all over Europe the causes, from the sanitary point of view, of cholera epidemics which then occurred in all parts of the continent. From Calais to Constantinople I visited in many different countries the towns and the districts within those towns that had been most afflicted. The worst of all the epidemics was that of Hamburg. On the other hand, it was one of the epidemics which had been the most carefully studied and was therefore rendered useful as an object lesson. But in this connexion I could not help observing that as children make much of a new toy so are men of science liable to make much of a new discovery. Bacteriology (especially the researches of Professor Koch who had actually found the pathogenic microbe of cholera, the comma bacillus) was then new to the world of science and suggested novel conceptions, new probabilities, and new explanations. The natural tendency, of course, was to make too much of these novelties and this was especially shown in regard to the explanations given as to the cause of the great cholera epidemic at Hamburg. The whole world is deeply indebted to Professor Koch for the leading part which he has played in making both technicians and the public at large understand the very great importance of having a pure water-supply. This much at least the authorities at Hamburg realised and with commendable energy they proceeded to create waterworks for the efficient filtering of their very suspicious water-supply. But, on the other hand, in so far as the authorities and the public were led to imagine that once a pure water-supply had been obtained the chief thing to be done was accomplished, a mischievous and mistaken sense of security was engendered. Unfortunately, in spite of protests made to the contrary, the feeling has arisen that there is now no particular danger. People say that the cholera epidemic in 1892 was due to the fact that at Hamburg the water of the Elbe was drunk without being filtered, while at Altona, which is practically a part of Hamburg, the water was filtered and there was no cholera. Of course, if this statement was true it would seem that it was only necessary to filter the water at Hamburg as at Altona and Hamburg would also be free from cholera. This presentation of the case, however, is not only false in fact but it is most mischievous in result; for it actually has led to the filtering of the water supplied to Hamburg, which is a good thing in itself, but it has also rendered it more easy for the authorities to neglect to take those other measures of reform which were, to say the very least, quite as necessary and urgent.

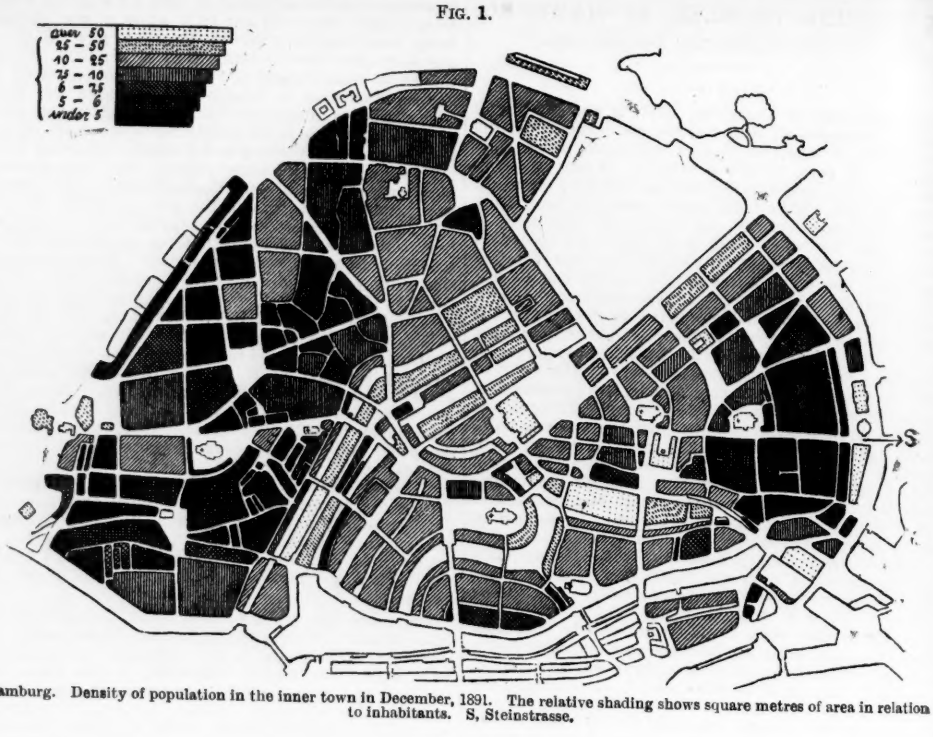
The comparison made between Altona and Hamburg is false if it only deals with the question of water-supply and the epidemic of 1892. As I pointed out at the time there have been other cholera epidemics. In 1831 the water drunk at Altona was not filtered and was probably much more contaminated than that drunk at Hamburg, but the death-rate from cholera was 0·5 per 1000 inhabitants at Altona and at Hamburg it was 3·4 per 1000. Again, in 1866 the death-rate from cholera at Altona was 1·4 per 1000 and at Hamburg 5·4 per 1000. There has never been a severe cholera epidemic at Altona but the water-supply of Altona was not always better than that of Hamburg. Indeed, if we take the cholera history from its beginning—namely, from 1831—it may be said that in most cases the Hamburg water-supply was better than that of Altona. The Altona intake being lower down the river, the people of Altona drank water contaminated by the cholera dejecta from Hamburg, and nevertheless did not suffer nearly as much as their neighbours. Then there were two very slight outbreaks of cholera in 1867 and 1871, when there were more cases at Altona than at Hamburg—there being in 1867 15 deaths at Hamburg and 44 deaths at Altona, and in 1871 105 deaths at Altona and 101 at Hamburg; but in all the great epidemics Hamburg has always suffered very much more than Altona.

What, however, is far more conclusive than the difference between Altona and Hamburg are the differences that exist within Hamburg itself. This was graphically set forth in a map published in these columns.[1] In the Harvestehude district on high and dry ground, where the average annual income per head is estimated at 3155.6 marks, the death-rate from cholera was 4·48 per 1000, while in the Veddal low-lying, damp district, where the income is only 118.93 marks, the death-rate from cholera was 27·50 per 1000. Thus with the same water-supply and within Hamburg itself much greater differences in fatality occurred than was the case with respect to Altona and Hamburg. Doubtless the germs of cholera were borne to the population in the water-supply, but the effect which these germs produced depended on many other causes than the water-supply. Nor were poverty and overcrowding the only predisposing causes. As pointed out at the time and set forth in the map published, the number of cases and deaths was much greater in that part of the town where the houses were built on ground that had been redeemed from the bed of the river. Taking the whole of this marshy soil, the death-rate from cholera in 1892 was equal to 16·17 per 1000 of the population and on the drier ground it was 10·84 per 1000. But on such large areas as this other causes came into effect. In each of the small districts which happened to be partially on dry and partially on damp soil and where the conditions were more alike a great difference was likewise noticed. Thus, in the Borgfelde districts 11,177 persons lived on dry soil and there were among them 13·22 deaths per 1000, while 5192 lived on damp soil and the proportion of deaths among them due to cholera was 17·53 per 1000. The average income for the entire Borgfelde district was 554.8 marks per head per annum. Thus the principal factors were poverty, overcrowding, and damp subsoil. Throughout the water-supply was the same but the violence of the epidemic varied immensely. Such, briefly, were the most remarkable facts which I elucidated when I visited Hamburg shortly after the great cholera epidemic.

The other day, when accompanying the members of the International Congress of Hygiene and Demography on their excursion to Hamburg, I was naturally anxious to see to what extent the lessons conveyed by the great cholera epidemic had been applied. Consequently I revisited some of the more notorious cholera centres. Hamburg was celebrated for its very narrow courts, so narrow that in some cases it was possible to step out of a window on one side of the court into the window of the house on the opposite side of the court. The staircases were so small and precipitous that it was no unusual thing to wrap a corpse in a sheet and lower it out of the window. On other occasions the undertaker would carry the body down on his back. In any case the coffin could not be taken into the house up such narrow ladder-like stairs. The coffins were therefore placed in the yard or court and very often were put close to the one solitary tap that supplied drinking water to all the houses. The inhabitants had to come to draw water close to one or more coffins containing the corpses of persons who had died from cholera and were awaiting burial. In these narrow courts where but little light or air could penetrate people hung their linen to dry suspended on poles from the windows. As I remarked at the time, some of this linen was doubtless cholera-infected and inefficiently purified by hasty washing. As it hung out in front of the windows drops of contaminated water fell on the rough pavement below or on persons passing to and fro. The water-supply might be of the purest and still in such circumstances cholera could easily spread from house to house. These dreadful slums were denounced at the time and a photographer published seven reproductions of photographs which he had taken of the courts. Between two of the lower pictures on the left he quoted the words of Professor von Pettenkofer, "What I saw in Hamburg of the condition of dwellings and of food defies all description." Whilst on the right were the words of Professor Koch: "Gentlemen, I forget that I am in Europe." Underneath and in contrast with the opinion of these eminent authorities was a quotation from one of the Hamburg authorities, Senator Dr. Monkeberg, who said: "Hamburg from a sanitary point of view is in a first-class condition." No comment was added, the public were left to judge from the photographs. They had, however, but scant opportunity of doing so. The photographer was arrested, was fined 600 marks, and the photographs were seized and destroyed. It was with the greatest difficulty that I succeeded in procuring a copy which was reproduced in THE LANCET of July 7th, 1894, p. 47. It will be readily understood that in such circumstances I felt it a matter of duty to raise a protest against the theory that the water was the sole

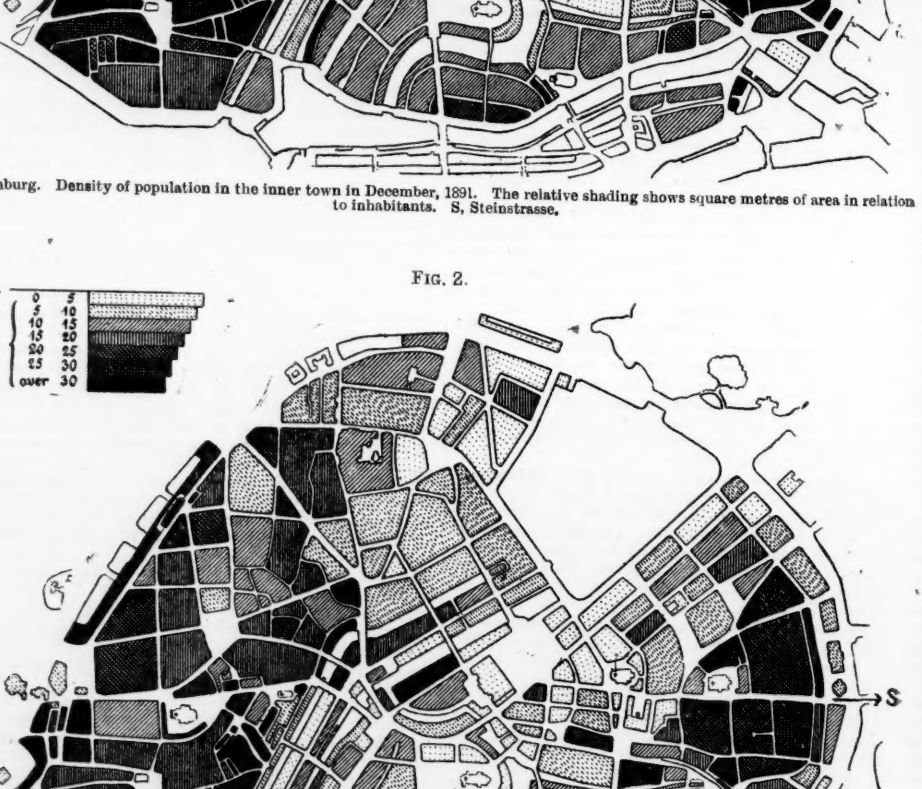
[1] THE LANCET, August 25th, 1894, p. 459.

FIG. 1.



Hamburg. Density of population in the inner town in December, 1891. The relative shading shows square metres of area in relation to inhabitants. S, Steinstrasse.

FIG. 2.



Hamburg. Cholera mortality in the inner town in the year 1892. The relative shading shows deaths per 1000 inhabitants. S, Steinstrasse.

cause of the spread of cholera and to point out that there were many other matters of equal importance. There was a great danger that the water filters would serve chiefly as a cemetery to bury the claims of sanitary reform, and this has to some extent been the case. Incredible as it may seem to anyone who realises what the slums of Hamburg were like, nothing was done to remedy their condition for some ten years after the great cholera epidemic. This terrible outbreak began in August, 1892. In the following month of September and before the epidemic was over the new waterworks were commenced. Regardless of expense, some 4000 men were engaged, and they worked night and day, and in the month of May, 1893, the waterworks were completed. Let this energy be contrasted with the neglect of the slums. It was only three years ago that a large clearing scheme was taken in hand and it will require at least another year before it is completed.

The district affected suffered greatly from cholera and consisted, to a large extent, of narrow courts like those described above. It is situated near the St Pauli Harbour and lies between the Schaarmarket and the St. Pauli gardens and is therefore in the very centre of Hamburg. The State of Hamburg bought up the land by friendly negotiations and paid very dearly for it. As the buildings were so insanitary they were all pulled down; a compulsory expropriation scheme allowing compensation to the owners according to the sanitary value of the buildings might have cost the community much less. The International Congress on the housing question, which was held at Geneva some two years ago and which consisted for the most part of land owners and of house owners, passed a resolution admitting the principle that compensation should only be on the sanitary value of a dwelling. Thus if a house is worth £1000, but it would cost £200 to put it in a proper sanitary condition, then the compensation to be paid should be £800. This principle applied to the Hamburg slums would have brought down the value of the property to such an extent as to render a rehousing scheme quite feasible from the financial point of view. As matters now stand there is no rehousing scheme whatsoever in existence. The poor people have simply been driven away from their work and means of livelihood and a population of well-to-do persons have been brought in who have no need to dwell near the port. The rents for tenements in this district used to be from 140 to 320 marks per annum; now they will be from 450 to 500 marks and in some cases very much more than this. It will be seen, therefore, that though some slums have been pulled down the Hamburg authorities have not touched the housing problem.

The former inhabitants of the district now pulled down for the most part worked at the port as dockers, stevedores, and in other capacities. Their employment was irregular but the best workers when in work could earn 5*s*. and 6*s*. a day and 8*s*. at night work. Living close to the port it sufficed that one member of the family, or one out of several neighbours, should watch for the arrival of a ship and the others could sleep without fear of missing a chance to get work. Now that these men are driven from their homes they must either go to live on the outskirts of the town or must try to find room in the already overcrowded slums that still remain near the port and have not yet been pulled down. If, however, they go to a better class tenement then the rent is so high that it could not be paid by an ordinary workman and his family unless they take in some single men lodgers. This, perhaps, would not so much matter if the work was regular and all the men left the house at the same hour and returned together. As it is, the husband may be at work, while the single man lodger is at home alone with his wife. The best and more respectable families do not like to live near other families that keep single men lodgers. It may be said, therefore, that the little that has been done only tends to an increase of immorality and an increase of overcrowding in the slums that remain. These have now more inhabitants than at the time of the cholera epidemic. But there exists a certain proportion of this population which has gone to live in the outskirts where the rents are cheaper and there is much more space. They ought to be better off; but when they lived close to the port they sent a boy to watch for a ship. Now all the workers have to come and to wait near the port. This takes them far from their houses and the only places where they can wait are the beer-shops. Consequently they spend in drink probably much more than they save in rent. The women and children suffer in consequence.

With the experience of London and the large towns of England before them it seems strange that the Hamburg Senate should have committed such a series of blunders. Obviously the English law which insists that in rebuilding a condemned insanitary area tenements must be provided for the same class of tenants could have been applied to the districts of Hamburg inhabited by the working population engaged in the harbour. This would have prevented many of the existing grievances and suffering. According to the information given to me the scheme has cost the State of Hamburg £600,000 and the Senate does not expect to get more than half this money back. Further, I was informed that the landowning class would never have voted the money to carry out the scheme except on the understanding that the town was to sell the land and thus to open out a large field for speculation. As a result the ground in this former cholera-stricken district is now quoted at 450 marks the square metre. Instead of the picturesque old slums there are ugly modern blocks of houses where £60 a year are charged for a first floor flat of only four rooms, the largest room measuring three by four metres. This at least was the price quoted to me when I made inquiries on the spot. There were also some small tenements at £25 consisting of two rooms and a kitchen. Then five shops were pointed out to me in this reconstructed district, and the rent was £300 each, though this is a district where poor dock labourers used to live. Obviously it has become a hot-bed of speculation, bringing people to live or to open shops here, though there is no special reason or need for them to be near the port.

It does appear, however, as if the Senate of Hamburg was now beginning to profit by all this experience. For instance, they are refusing to allot land to builders unless there is an undertaking that the proper sort of tenement house is constructed, a tenement where the subletting to a lodger will not be permitted or possible. Also, with an eye to the future, the city has bought a very large amount of uninhabited and agricultural land in the outskirts. Here it is proposed to build schools and hospitals, and the

FIG. 3.

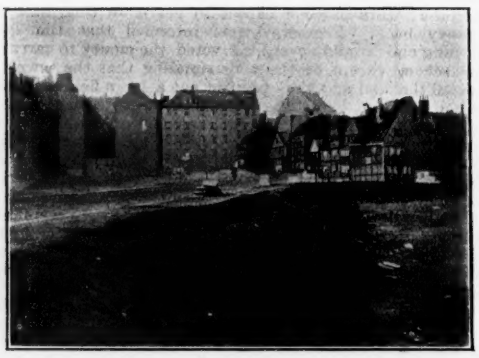
Hamburg. General view of cleared area.

authorities will be in a position to control the expansion of the city as it grows beyond its present limits. Perhaps in the course of time Hamburg will imitate the example set by Huddersfield many years ago. To relieve the congestion in the slums of the centre of Huddersfield the municipality built a line and ran steam trams up a steep hill to a very healthy quarter at a little distance from the town where, however, there were hardly any inhabitants. No private company, of course, would supply trams at a dead loss but it paid the town to do this because it helped to relieve the overcrowding in the centre and in the course of years, as the population increased in the new quarter, the trams began to pay. Something of the sort is needed at Hamburg, so that living in the outskirts of the city may be rendered more practicable, especially to workmen.

The authorities themselves have published most telling maps showing how disease and density of population go hand in hand. For instance, the two maps which are reproduced are almost identical (Figs. 1 and 2). In the map showing the density of population in 1891 there are to the north-east two square blocks and one triangular block side by side which are

darker in respect to overcrowding than in respect to cases of cholera. The fact that the prevalence of cholera here does not quite correspond with the prevalence of overcrowding is probably due to the fact that this district is on a higher ground. The importance of raising the ground is now well

FIG. 4.



Hamburg. View of cleared area showing the artificial elevation of the new building sites.

appreciated. The Schaarmarket district, as described above, is not only being rebuilt but an enormous quantity of earth is being brought in so as to raise the ground considerably above its former low level. The photographs which I was able to take of the part of the cleared area which has not yet been rebuilt show this (Figs. 3 and 4). The level of the new road has already been raised and the houses will have to be built up to that level. This will mean a great improvement from the sanitary point of view but it will not affect those sections of the population which have most need of such measures.

(To be continued.)

NOTES UPON HEALTH RESORTS.

JAMAICA AS A HEALTH RESORT.

(BY OUR SPECIAL COMMISSIONER.)

IV.[1]

THE MINERAL SPRINGS.—MILK RIVER.—BATH.—THE WATER-SUPPLY.

JAMAICA is liberally endowed with mineral springs, no less than 15 being mentioned in a pamphlet published in 1891 by the Hon. J. C. Phillippo, M.D., under the auspices of the Institute of Jamaica, to call attention to these therapeutic assets of the island. They include saline, calcic, sulphurous, and chalybeate waters, but at only two of them has any attempt been made to provide accommodation for their systematic use. These are the hot springs of Milk River, Clarendon, and the bath of St. Thomas the Apostle at Bath. As the former resort came within easy reach of my itinerary I made a little detour to spend a night there in order to report on the waters and the accommodation. The baths are situated 12 miles from Clarendon Park Station on the Montego Bay line, and these miles were covered in a very ramshackle buggy which had to be ordered beforehand. On approaching the settlement I found a fairly broad river winding through plainlands, on the right bank of which was a range of hills, and at the foot of one of these a cluster of old houses built high on brick piles and approached by steep stone steps. These were the lodging-houses and the matron's house. It may be said at once that the accommodation was entirely inadequate to the needs of anyone acutely ill, although a chronic invalid might tolerate it, but it is fair to add that I visited the place in the off-season and before it had been put in order for the winter. The matron did her utmost to make the place comfortable and the servants were civil and obliging. For the rest, the rooms were roughly furnished and the beds were provided with horse-hair mattresses and were stony hard. There was no soda-water obtainable and the drinking water was from the river, unboiled and passed through an ancient drip-stone; the milk was condensed, though I was told that fresh milk would have been available had it not been for the recent drought, of which the countryside bore melancholy evidence. The food was plain but fairly cooked. The sanitary arrangements were ill-ventilated earth closets under a house in a sort of dark cloister, into which also opened the doors of the baths for paying guests. There are a separate free bath and lodging-house for poor persons, in whose interests the settlement was founded as a charity in 1791. The two bath-houses each have about three feet of water in them which is constantly flowing through from the hot spring issuing from the hill above. Each has a wooden platform for dressing, with steps leading into the bath which has a slate bottom. The bath-houses were clean but ill-ventilated and somewhat gloomy; their atmosphere was stifling, 86° F. on the day of my visit, but this was in exceptionally hot weather. The redeeming feature of the whole place was the bath itself; the spring is of an exceptional quality and would have brought prosperity to any continental town. The temperature of the water as it flows out is 92° and its analysis is as follows:—

Chloride of sodium	20·7	parts per	100,000.
Sulphate of sodium	3·40	,,	,,
Chloride of magnesium	4·12	,,	,,
,, potassium	0·16	,,	,,
Lithia, silicon, and bromine	Traces.		

It will be seen at once that the water contains a high proportion of salts and the effects of bathing in it are marked. The body whilst immersed feels buoyant and the skin acquires a soft feeling that can only be called velvety. After half an hour's bath (the usual period) a pleasant sense of fatigue is experienced, although those accustomed to use the bath speak of its bracing effect on them. The water is, of course, strongly saline to taste, although not as nauseous as sea-water, and a tumblerful is easily swallowed whilst dressing. The temperature of the bath (92°) is delightful, as one could sit in it for hours without feeling either chilled or exhausted. There is abundant evidence as to its therapeutic value, especially in chronic rheumatism and osteo-arthritis, whilst for the crowd of evils which follow on a congested portal system the regular bathing and drinking of the waters have also a beneficial effect. The feature of the Milk River bath which probably stands most in the way of its development is its situation in a low-lying malarious district where the mosquitoes come up in thousands at sunset, as the writer can abundantly testify. Sand-flies are another terror of the district and its only real attraction is the river, which is a beautiful example of a sub-tropical stream, winding about three miles down to a wild piece of coast and a glorious sea. There are good fishing in the season (October to April), some fair pigeon shooting, and occasionally a chance at an alligator, for there are many of those beasts in the river. Under the present conditions some hundreds of persons receive great benefit from the baths every year and if the accommodation were only improved many more would doubtless be attracted to them, for their efficacy is endorsed by many medical men in the colony. At present about 30 visitors could be accommodated at a time, although one of the lodging-houses is in a very unsatisfactory condition.

A more noted spa is at Bath, in St. Thomas at the eastern end of the island. Of this spring Sir Hans Sloane wrote in 1707 that it "has been bathed in and drunk of late years for the belly-ache with great success," and 50 years later the historian Long records how "many persons of fortune took up lots and erected houses. The square was soon adorned with a hospital, a public lodging-house, and a billiard room. It became a fashionable resort for people from all parts of the island." But its social glories soon departed, although the medicinal value of these thermic sulphurous springs has never been lost sight of. Long, who wrote in 1774, describes how "At first drinking it diffuses a thrilling glow over the whole body and the continued use enlivens the spirits and produces the same joyous effects as inebriation." I did not visit Bath, which is 45 miles by road from Kingston, the only other means of access being by coastal steamer to Port

[1] Nos. I., II., and III. were published in THE LANCET of Oct. 5th (p. 985) and 26th (p. 1193), and Nov. 16th (p. 1421), 1907, respectively.

Morant and thence by road for 14 miles. The following brief account is from the "Handbook of Jamaica":—

The road from the town of Bath to the spring follows the windings of a deep and narrow gorge, in the bottom of which flows a perennial spring, to which, rolling down the rocky sides covered in fern, numerous rills contribute. The mineral springs occur in a short space breaking out from the rocks at different levels, and by their warmth the waters are distinguished from the ordinary waters of the gorge. The largest spring issues from the face of a perpendicular rock. A covered reservoir of masonry has been built round the outlet, and a pipe fixed in it carries the water to the bath-house. In wet weather the temperature of the water, as it runs from the rock, was taken as 128° F., and it rises in dry weather to 130° F. Tradition asserts that these waters were discovered by a negro who in his own person found their efficacy.

The analysis of the Bath water gives the following mineral constituents in one gallon of water:—

Chloride of sodium	13·84	grains.
,, potassium	0·32	,,
Sulphate of calcium	5·01	,,
,, sodium	6·37	,,
Carbonate of sodium	1·69	,,
Silica	2·72	,,
Oxide of sodium combined with silica	1·00	,,
Organic matter	0·99	,,

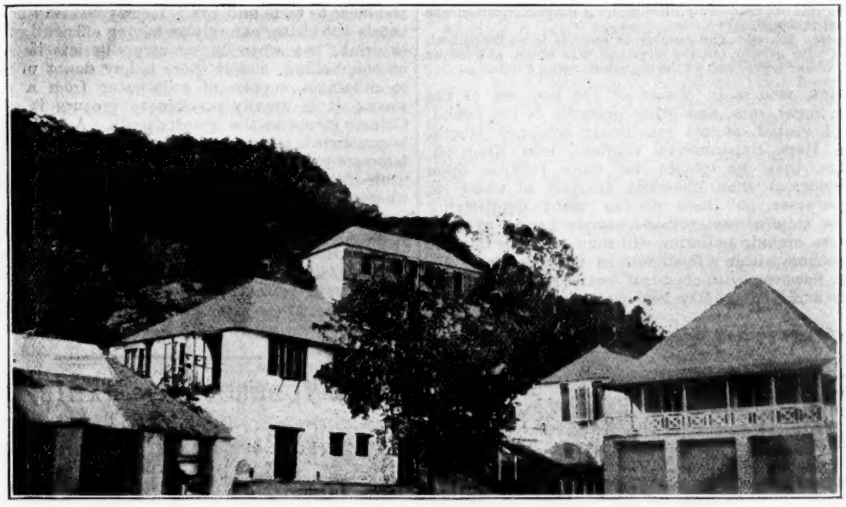
The waters are distinctly sulphurous and evolve sulphuretted hydrogen which is alleged to be formed in the depths of the earth and not from decaying organic matter on the surface. Their composition somewhat resembles that of the waters of the English Bath and very closely those of the Eaux Bonnes and Eaux Chaudes in the Pyrenees. Although the accommodation for visitors to the Jamaican Bath is not equal to that of any well-known continental spa, yet Dr. James Johnston is able to write thus of it in his beautiful picture book, "Jamaica, the New Riviera":—

The bath building is in good condition, and quite a party might be accommodated upstairs with sleeping apartments by giving previous notice to the manager, whilst downstairs are the baths, two built of marble for ladies and three of cement for gentlemen. All the conveniences and accessories of a well-appointed establishment were at hand.

The baths have a great island repute not only for the class of case treated at Milk River but also for such skin diseases as are known to receive benefit from sulphur springs. The situation is unfortunately low and Morant is one of the most tropical parts of the island. There is little besides the natural surroundings to entertain visitors. Both Bath and Milk River spas are capable of great development. The visitor under present conditions to either spa will at any rate find very cheap accommodation, for they were both founded as charities and no attempt is made to exploit invalids able to pay for their board and lodging.

Your commissioner has next to consider the water-supply of Jamaica, which is from three main sources: (1) from rivers in the towns along their course and on the sea-board; (2) from rainwater with roof or barbecue catchment with tank storage in country districts; and (3) from wells and tanks with ground catchment, also in country districts. My visit was made at a time when the resources in many districts had been severely strained by an exceptional drought, although rain was beginning to fall in heavy thunder showers. The possibility of such an event is not the only reason for a shortage of water-supply in Jamaica, for the extremely porous nature of the limestone and marl formations causes a large proportion of the annual rainfall to pass underground to the sea. The rivers are also subject to great variation, as a dry rocky mountain gorge with a small stream trickling down it will after a few days of the October rains present a "roaring river in stormy spate."

With regard to these three sources of supply. 1. The sea-board towns are fed by rivers and some of them have a house-to-house pipe service. The Hon. Mr. J. Errington Ker, island medical officer, supplied me with the following complete list of Jamaican towns thus supplied: Kingston, May Pen, Spanish Town, Savanna la Mar, Black River, Lucea, Montego Bay, Falmouth, St. Ann's Bay, Port Maria, Buff Bay, and Port Antonio. The rivers are much subjected to sewage pollution from native settlements along their banks but they nearly all have the advantage of being rapid mountain streams, well aerated by running over rocks. Where they have a long course over the plains before their outfall this advantage is of course diminished, as it is when their water falls very low. The waterworks at the towns have various filtration systems and Dr. Cousins, the Government analyst, has kindly supplied me with the following sample analyses made in January last of the Kingston water-supply. The supply is from two sources—the Hope River, which after passing through an open cement channel is known as the Cavaliers supply; and the Constant Spring, from which the hotel of that name draws its water which is boiled before use for drinking purposes.



Bath-house and lodging-house at the Milk River Mineral Spring.

Report of the Jamaican Government Analyst on Samples of Water forming Kingston Water-supply.

Constant Spring Filtered. Jan. 8th, 1907.

	Parts per 100,000.
Total solids	15·825
Chlorine	0·8
Nitrogen as free ammonia	0·002
,, as organic ammonia	0·004
,, as nitrates or nitrites	*Nil.*
Oxygen consumed in 15 minutes	0·005
,, ,, ,, 4 hours	0·0127

Colour in 2 ft. tube: faint clear grey.

Cavaliers (Hope River) Filtered. Average of three specimens. Jan. 8th, 1907.

	Parts per 100,000.
Total solids	24·975
Chlorine	0·95
Nitrogen as free ammonia	0·0008
,, as organic ammonia	0·0030
Oxygen consumed in 15 minutes	0·0045
,, ,, ,, 4 hours	0·0177

Colour in 2 ft. tube: clear.

Report of Government Bacteriologist on Samples of Water supplying Kingston, Jan. 8th, 1907.

Hope crude.—The sample was taken at the inlet of the settling reservoir and was quite clear. The number of colonies developing both on agar and gelatin is very high, but is not excessive for a crude water from the standpoint of English conditions. The number of liquefying organisms does not exceed 13 per cent. of the total. Bacillus coli communis was present even in $\frac{1}{10}$th cubic centimetre of water, but the bacillus enteritidis sporogenes of Klein was not present in 250 cubic centimetres. Another butyric form giving the characteristic clot was present in 250 cubic centimetres.

Cavaliers crude.—This water is the same as the Hope crude but has had to pass through an open cement channel for a distance before entering a pipe. There are only one quarter of the total number of colonies developed both on gelatin and agar as in the case of the Hope crude water, and neither bacillus coli communis nor butyric organisms could be found in it. It is evident that this water has greatly improved bacteriologically since leaving Hope. The number of liquefying organisms is 37 per cent. of the total, or nearly three times the proportion of the Hope water. It appears that the bacillus coli communis (and other non-liquefying organisms) were killed out during the passage of the water through the open channel.

Hope filtered.—The total number of organisms per 1 cubic centimetre is both on gelatin and on agar under 50. Both media show that about 95 per cent. of the organisms present in the crude water have been eliminated by filtration. Neither bacillus coli communis nor butyric organisms are present. The water has therefore been efficiently filtered and from the bacteriological standpoint is quite fit for drinking.

Constant Spring crude.—This water contained about one quarter of the total bacteria found in the Hope unfiltered and is a little better in this respect than the sample of Cavaliers crude examined. The proportion of liquefying bacteria is about the same as in the Hope crude—namely, 14 per cent. No bacillus coli communis could be found but only related forms not necessarily intestinal. A butyric organism was present but not the bacillus of Klein.

Constant Spring filtered.—The number of bacteria is under 50 both with agar and with gelatin, but the filtration ratio is not so good as that of Hope, under 90 per cent. of the organisms being eliminated.

Dr. Cousins, who is in charge of the analyses of the water, milk, sugar, rum, and other products of the island, and whom I visited at his excellently equipped laboratory at the Hope Experimental Gardens, near Kingston, informed me that he places far more reliance upon the bacteriological than chemical analysis of water for drinking purposes as there are so many denitrifying organisms in tropical water that a sample known to have received gross organic pollution will show only the faintest traces of ammonia within a few hours of its collection. He supplied me, however, with chemical analyses of water from Port Antonio and Montego Bay, both made some years ago :—

Analysis of Montego Bay Water-supply, Belle Vue Spring.

	Parts per 100,000.
Total solids	26·24
Chlorine	0·94
Nitrogen as free ammonia	*Nil.*
,, as organic ammonia	0·002
,, as nitrates	0·073
,, as nitrites	—
Oxygen consumed in 15 minutes	0 0017
,, ,, 4 hours	0·0026
Hardness, temporary	13·94
,, permanent	2·50

(Analysis by J. Bowrey, F.C.S., late Island Chemist, Jamaica.)

Analysis of Port Antonio Water-supply. Bound Brook River. Stream from Limestone.

	Parts per 100,000.
Total solids	18 72
Chlorine	0 9
Nitrogen as free ammonia	*Nil.*
,, as organic ammonia	0·003
,, as nitrates	*Nil.*
,, as nitrites	*Nil.*
Oxygen consumed in 15 minutes	—
,, ,, 4 hours	0 0056
Hardness, temporary	12 88
,, permanent	2 66
Total hardness	15 54

Colour in 2 ft. tube: yellow green.

2. Turning to the rain-water supplies in country districts the usual method of catchment is on cedar shingle or occasionally galvanised-iron roofs, the water being conducted in wooden or cement channels, which are mostly uncovered, to open masonry and cement tanks where it is stored. Many better-class houses have different tanks for drinking and cleansing supplies. The main objection to these tanks is that they are very rarely covered except by a thick growth of duckweed over the water, which the residents declare keeps it clean and cool and is quite harmless. I was unable to procure an analysis of any of these waters, but it appears that the supply would be much safer if the tanks were roofed in, as there is a strong possibility of pollution by animal excreta in many places; the roofs afforded clean catchment areas but are sometimes fouled by droppings from pigeons and John crows. Rain water is also caught on stone or cement terraces known as barbecues, similar to those used for drying coffee and pimento berries; these are also obviously open to animal excreta, although those I saw were all clean. The tanks are mostly privately owned, although in some districts the local authorities have erected public reservoirs. At the time of the drought great distress was caused to the natives in many places, especially in hill districts where water had often to be brought in casks for miles.

3. The third supply is from deep wells which do not occur frequently and from surface springs, with which may be classed water caught in tanks from ground drainage near houses, which is obviously unfit for drinking in its crude state in a country abounding with domestic animals and vegetation.

In considering these various sources of supply it may be laid down as a positive rule that all water in Jamaica should be boiled before drinking. There are some Pasteur filters in Jamaica but the useless charcoal filter is much more common. In country districts, however, complete reliance is mostly placed in the Barbados dripstone, a large filter of porous sandstone out of which water drips cool and clear to taste and eye. It may be said that at the large hotels the visitor can rely on having efficiently filtered water to drink, but when in country districts he should insist on the boiling, and if there is any doubt of it it is safer to obtain a supply of soda-water from a neighbouring town; it is usually possible to procure it at the larger Chinese stores in the country parts. A large amount of ice is consumed, as in every other tropical locality; there are factories at Kingston, Montego Bay, and Port Antonio and it is obtainable in most tourist centres except in the mountains where its need is not felt. I did not hear of any trouble having arisen from impure ice but several medical officers spoke strongly about its evil effects in producing dyspepsia and gastritis when used immoderately. On a really hot day in the plains it certainly requires much self-restraint to refrain from its use if it be available.

R.M.S. *Port Kingston*, Oct. 3rd.

(To be continued.)

THE TUBERCULOSIS EXHIBITION IN BELFAST.

(FROM OUR BELFAST CORRESPONDENT.)

THE exhibition opened in Belfast on Nov. 22nd by Sir Richard Douglas Powell, Bart., the President of the Royal College of Physicians of London, reference to which was made in your columns last week, owes its origin, so far as Ireland is concerned, to the Countess of Aberdeen who recently founded the Women's National Health Association of Ireland, one of the objects of which is to arouse public opinion, and especially that of the women of Ireland, to the alarming increase of tuberculosis in that country, and to organise the active coöperation of women of all classes in a combined effort to stamp out what medical science has discovered to be, to a large extent, a preventable disease. The exhibition has for its object to educate the general public in regard to the causes, prevention, and cure of consumption in all its forms. Opened originally in Dublin, it proved a marked success, and on Oct. 1st at a very representative meeting called by Sir John Byers and Mr. F. W. Moneypenny, M.V.O., in the City Hall, Belfast, an influential committee was formed, with Dr. Thomas Houston and Dr. John MacIlwaine as honorary secretaries. The old town hall—in the very centre of Belfast—was secured for holding the exhibition.

The first duty of the committee was to decide on the number of sections and as to who should take charge of them, which was finally arranged as follows: 1. The section of pathology, under the direction of Professor William St. Clair Symmers, Queen's College, Belfast. 2. The veterinary section, under the direction of Mr. Ross, M.R.C.V.S., President of the Ulster Veterinary Association; Mr. Jordan, M.R.C.V.S., veterinary surgeon to the Belfast Corporation; Mr. Gregg, M.R.C.V.S.; and Mr. Johnston, M.R.C.V.S. 3. The

food section, under the direction of Dr. Elizabeth G. Bell (convener), Dr. Marian B. Andrews, Dr. Annie K. Watson, Dr. Mary E. M. Logan, Mrs. Forster Green, Mrs. Payne, Miss F. Clarke, Miss M'Corry, and Miss Bessie Duffin. 4. The statistical section, under the direction of Sir John Byers. 5. The appliances section, under the direction of Professor J. A. Lindsay, Dr. W. Calwell, Dr. J. Simpson, Dr. R. J. Purdon, Dr. Alexander Dempsey, Mr. H. W. Bailie, medical officer of health of Belfast; Professor Sinclair; Dr. John McCaw, President of the Ulster Medical Society; Dr. C. J. Clibborn, medical inspector to the Local Government Board; Dr. J. C. Rankin, and Mr. H. Norman Barnett, F.R.C.S. Edin., as secretary of the section.

The exhibition is admirably arranged. The old council chamber, which is hung with diagrams and charts lent by Sir Robert Matheson, Sir R. Douglas Powell, and others, is used as a lecture hall, where also on each day demonstrations of cookery for the sick are given; while the different sections are housed in the adjoining rooms as well as in the open courtyard between the old town hall and the police courts. The first section, that of human pathology, is situated in the most southern room of the town hall. In it are a series of most interesting medical and surgical specimens showing the results of tubercle in various parts of the body—different stages of the malady being shown. In connexion with each specimen there is a printed card stating plainly what is wrong and the jars being placed on a table in the centre of the room, about five feet from the ground, are admirably seen. There are also culture tubes of the tubercle bacilli, diagrams on the walls to illustrate their ravages, and clever models prepared by Dr. C. L. Birmingham of Westport, co. Mayo, illustrating very effectively the microscopic appearance of tubercle bacilli in human sputum when stained with aniline and magnified. All the jar specimens are contributed from the pathological laboratory of Queen's College, Belfast. In the corner of the room there is a glass-covered circular table with the appliances used by Sir A. E. Wright, F.R.S., a distinguished son of Belfast, in obtaining the opsonic index. Dr. Houston and Dr. J. C. Rankin, who following Sir A. E. Wright's method have done important work in reference to cerebro-spinal fever, have supplied this valuable exhibit.

The veterinary section is housed in two rooms on the north side of the town hall. In the first room there is on exhibition a live cow which to all outward appearances is entirely free from tuberculosis, but a temperature chart placed at the head of the stall shows that she has reacted to the tuberculin test. In the second room are placed some excellent specimens (lent by the head of the Royal Veterinary College, Dublin, Professor Mettam, F.R.C.V.S., and by Professor Symmers) showing how the disease exists in animals as well as in man, while, owing to his connexion with the city abattoir, Mr. Jordan, veterinary surgeon to the Belfast city council, is exhibiting some admirable fresh specimens of disease in animals. For instance, on several days beautiful specimens of a tuberculous udder of cows, &c., were exhibited, as were many specimens from the organs (spleens, lungs, kidneys, &c.) of other animals. Actual cultures are on view, while models and photographs of modern dairy appliances are shown, as well as the patent milking arrangement used in the Belvoir Park Model Dairy.

The food section has samples of the various kinds of foods suitable for consumptives: cheap meat-safes for the working classes (shown by Dr. Elizabeth G. Bell), milk sterilisers, and diagrams on the walls from the hygiene laboratory of Queen's College, Belfast, showing the relative nutritive value of foods, models of milk of various animals, &c. This is essentially the medical ladies' section and in connexion with it a series of cookery demonstrations are being given every afternoon by Miss F. D. Roberts, dealing specially with the food suitable for consumptives.

With regard to the statistical section, an hour might easily be spent in this very interesting section with its comprehensive array of notices in many languages, showing how everywhere nations are recognising the necessity of taking active measures to stamp out the disease. Inquirers will find stores of information in the charts, diagrams, reports, books, and pamphlets shown in this section dealing with tuberculosis. The Registrar-General's splendid diagrams are placed in the main lecture-hall, showing how sadly Ireland compares with almost every other country in regard to tuberculosis. Taking the British possessions and foreign countries, Ireland is only exceeded in its high death-rate from tuberculosis by three others. Charts of infantile mortality are also exhibited, showing the unenviable position occupied in this respect by Dublin and Belfast.

In the appliances section stands are provided by several of the leading firms of druggists in the city, in which are displayed articles which should be used by tuberculous patients, one portion of the room being devoted to sanitary appliances. There are also photographs and models of sanatoriums and chalets for consumptives and Roentgen ray photographs of tuberculous lungs, while in the open-air courtyard between the old town hall and the police courts are seen a series of full-size shelters and huts, amply furnished and lighted by electricity. In what used to be the Lord Mayor's parlour is placed one of the most effective object-lessons of the exhibition. The room has been partitioned into two sections, one of which (how *not* to do it) shows a bedroom after the ideal of our forefathers and with the defects of which too many of the present generation remain content. The windows are closed, the cracks in the window-glass are covered with paper and there are heavy curtains, so that the two great enemies of consumption (sunlight and pure air) are excluded. The old four-poster bed with its weighty curtains and the articles of furniture are all arranged to collect dust; in a word, the room is a perfect breeding-ground for the disease. In the contrast room there are the open window, no curtains, a simply-designed bedstead, and furniture that does not collect but shows dust, everything being arranged to let in the cheerful sunshine and the life-giving fresh air. Another good exhibit is a model of a children's open playground.

Such is a brief description of an exhibition which is admirably designed to teach by the best of all methods—the objective one—what the fell scourge of Ireland is and how it may be eradicated. In order to bring home even more plainly to the man in the street what can be done to combat the disease lectures are given every night and demonstrations are made at various periods of the day to those visiting the different sections as to what the exhibits teach. As a proof of the success of the exhibition it may be said that nearly 20,000 people visited it during the first week.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Liverpool School of Tropical Medicine: Visit of H.R.H. Princess Christian; Mr. Joseph Chamberlain, M.P., and the Mary Kingsley Medal; New Vice-President.

Her Royal Highness the Princess Christian, who is the President of the Liverpool School of Tropical Medicine, paid a visit to the school on Nov. 27th. She was received at the laboratories at the University of Liverpool by the Vice-Chancellor (Principal A. W. W. Dale), Professor Sir Rubert W. Boyce, F.R.S., and Mr. A. H. Milne, the secretary of the school. Among those presented to Her Royal Highness were Dr. W. T. Prout, C.M.G., late senior medical officer at Sierra Leone; Dr. Anton Breinl (the director of the Runcorn Research Laboratories), a member of the yellow fever expedition of the school who contracted that disease whilst serving on the expedition and who had to be invalided home; and Mr. Arthur J. Evans, who rendered much assistance to sufferers in the Jamaica earthquake. Many interesting microscopic specimens of the latest discoveries in the field of tropical medicine were shown to the Princess. To Sir Alfred Jones, the chairman of the school, who was unavoidably absent in London, the Princess sent a telegram congratulating the school on its great success. On leaving the laboratories a telegram was despatched by Her Royal Highness to the Right Hon. Joseph Chamberlain, M.P., on behalf of herself as President of the school, and Sir Alfred Jones as chairman, in recognition of Mr. Chamberlain's work in connexion with the foundation of the school:—

To the Right Hon. Joseph Chamberlain, M.P.,
Highbury, Moor Green, Birmingham.

We, as President and Chairman of the Liverpool School of Tropical Medicine, desire, on behalf of the school, to ask your acceptance of the Mary Kingsley Memorial medal, founded by the school in memory of the late Mary Kingsley for presentation to those who have specially distinguished themselves in the noble cause of amelioration of health conditions in the tropics, a cause which you have personally so much helped.

During the visit of the Princess the ordinary work of the school was in progress and Her Royal Highness had an

opportunity of seeing the students. Lord Cromer has been elected a Vice-President of the school.

The Prevention of Malaria.

The reports presented by Professor Ronald Ross on the prevention of malaria continue to be of the most gratifying description. The campaign in Ismailia has been the most successful on record, so that in 1906 the Suez Canal Company officially reported that all trace of malaria had disappeared from the district. Other places from which favourable reports have been received are Klang and Port Swettenham, Hong-Kong and Khartoum, and especially Havana and Panama.

Changes at the Royal Southern Hospital.

Dr. William Carter (professor of materia medica at the University of Liverpool), the senior honorary physician, and Mr. William Alexander, the senior honorary surgeon, will shortly vacate their offices. Professor Carter has held the post of honorary physician for 36 years, whilst Mr. Alexander was appointed honorary surgeon nearly 20 years ago. It is the intention of the committee to propose at the next annual meeting of the trustees an alteration of the laws by fixing an age-limit at which all honorary medical officers shall retire. On his return from the Mauritius, Professor Ronald Ross is to be invited by the committee to accept the post of honorary physician to the ward for tropical diseases in the hospital. At a recent conversazione at the hospital Mr. William Adamson, the president of the hospital, made this pleasing intimation, and it is generally hoped that Professor Ross may see his way to accept the office for which he is so thoroughly equipped.

Dec. 3rd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Annual Report of the Western Infirmary, Glasgow.

THE annual report of the Western Infirmary just issued states that during the year the number of patients treated was 37,080—29,524 outdoor and 7556 indoor—an increase in the former of 2068 and in the latter of 1170 compared with the previous year. The ordinary income was £22 614 and the ordinary expenditure £36,298, showing a deficit of £13,684, as compared with a deficit of £10,713 in the preceding year. Although under every heading of annual subscriptions and donations there is a substantial increase, at the same time there is a much greater increase in the annual expenditure, owing to the recent opening of a new wing with 70 additional beds. For many years past, on account of the rapid development of the city westward, and the consequent pressure on the accommodation of the infirmary, the ordinary income has fallen far short of meeting the ordinary expenditure. As a rule the balance at the credit of extraordinary income from legacies, &c., has enabled the managers to make up these deficits, but during the past two years the extraordinary income has failed in this respect, necessitating the withdrawal in that period of £15,174 from stock account to supplement ordinary expenditure. No doubt the extraordinary income during the two years referred to had to bear heavy payments in connexion with the new dispensary, structural alterations, &c., but the coming year is not quite free from similar obligations. It is pointed out that the unrestricted funds under stock account available to meet ordinary or extraordinary emergencies are now reduced to £23,841. An appeal is made to the working classes who so largely benefit by the infirmary, and it is suggested that the systematic method of giving now prevailing in most shipyards and large works in the city should be adopted by all. The plan for finally completing the infirmary building has been prepared and has generally received the approval of the managers, but this work cannot be entered upon until the necessary funds are in hand. The proposed extension consists of three blocks which are estimated to cost £80 000. The administrative department in the present building is considered sufficient for the full extensions when completed, and the new extension has been so planned that the blocks can if necessary be erected separately as funds are provided.

Freedom of the City of Glasgow for Lord Lister.

At a meeting of the town council of Glasgow held last week it was recommended that the freedom of the city be conferred upon Lord Lister, Lord Blythswood, and Mr. Cameron Corbett, M.P. It is peculiarly appropriate that Lord Lister should be so honoured by Glasgow, as it was in the wards of the Royal Infirmary in that city that he laid the foundation of his work on antiseptics. The medical profession will also welcome the honour to Lord Blythswood on account of the very perfect installation of medical apparatus which he presented to the Royal Infirmary some years ago. Mr. Cameron Corbett's name is more especially associated with his munificent gifts to the city of the park at Ranken Glen and the fine estate of Ardgoil.

University of Aberdeen: Meeting of the Senatus.

At a meeting of the Senatus of the University of Aberdeen, held on Nov. 26th, Professor Macdonald was unanimously appointed assessor to the University Court. Professor Thomson was appointed the representative of the University on the general committee of the Marine Biological Association of the West of Scotland. In connexion with the Franco-British Exhibition to be held next year in London a communication was read from the chairman of the association, inviting the University of Aberdeen to coöperate in the endeavour to make the Exhibition representative of the various features of British educational methods and results. It was resolved to accede to the request of the chairman and to forward such exhibits as may be found practicable, illustrating the life and work of the University, and to include photographs of the buildings, both of the exterior and interior, calendars, histories, and other works issued under the authority of the University.

University of Aberdeen: The Three-term Session.

A special meeting of the Council of the University of Aberdeen was held on Nov. 23rd in the Mitchell Hall, Marischal College, for the purpose of considering the question of substituting a session of three terms for the present arrangement of university teaching. Principal Lang presided over a large attendance. The report by the committee on the proposed extended session submitted at a former meeting of the Council was held as read. After a prolonged discussion it was resolved to appoint a special committee to make exhaustive inquiry into the whole subject of the arts curriculum in all its bearings and to report to the next statutory meeting of the Council.

Dec. 3rd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Tuberculosis Problem in Ireland.

ON Nov. 29th a deputation waited upon the Lord Lieutenant of Ireland, the Chief Secretary, and the Vice-Presidents of the Local Government Board and of the Department of Agriculture, for the purpose of laying before them the views of medical and other organisations on the subject of tuberculosis. The Royal College of Physicians of Ireland, the Royal College of Surgeons in Ireland, the Irish Medical Association, the Women's National Health Association, the committee of the Tuberculosis Exhibition, the Ulster and Cork Medical Societies, the Veterinary Association, and various other organisations for the prevention of consumption were represented. The Countess of Aberdeen introduced the deputation and Dr. Joseph M. Redmond, Sir Henry R. Swanzy, Professor Mettam (President of the Veterinary Medical Asscciation of Ireland), Dr. J. McCaw (President of the Ulster Medical Society), and others spoke. The points pressed upon the Government were: 1. Compulsory notification of tuberlosis (every precaution being taken to safeguard the liberty of the patient and to prevent any interference with the confidential relations which should exist between patient and medical man). 2. More strict, more stringent, and repressive measures for the regulation of milk and food supplies. 3. Powers to enable the county councils of Ireland to erect and to maintain such hospitals, sanatoriums, and dispensaries for the treatment of consumption as they think fit. 4. The urgent necessity for a system of medical inspection of schools and school children. The Lord Lieutenant and Mr. Birrell, in reply, spoke most sympathetically, and the latter

raised the interesting point as to whether they could deal with such a national calamity as consumption by a national rate, as had been done with contagious diseases of animals.

The Tuberculosis Exhibition in Belfast.

The Tuberculosis Exhibition in Belfast continues to be extremely popular and notwithstanding the inclemency of the weather the various sections have been crowded almost all day. Lectures have been given nightly and will continue to be given till the closing of the exhibition on Friday night next, Dec. 6th.

The Ulster Medical Society.

The annual dinner of the Ulster Medical Society was held in the Medical Institute, Belfast, on Thursday night, Nov. 28th, Dr. John McCaw, the President, occupying the chair. 49 members and guests were present and a very agreeable evening was spent.

Health of Belfast.

There has been a marked increase in notifications of typhoid and scarlet fever, and cerebro-spinal meningitis is still prevalent, 13 cases having been notified recently. The principal factor in the high death-rate from all causes is respiratory disease, whilst a welcome fall in the zymotic death-rate is due to decrease in deaths from diarrhœa.

Dec. 3rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Chloride of Calcium and Eczema.

AT a recent meeting of the Biological Society M. Parhon and M. Urechié communicated some observations upon a patient in whom eczema of the face had disappeared after the administration of calcium chloride. It would appear that in a certain number of cases eczema is due to some defect in calcium metabolism and the two observers mentioned the case of a patient suffering from hypothyroidea and widespread eczema. He improved very much as regards the eczema under the influence of thyroid treatment. It is well known that the thyroid body plays a considerable rôle in calcium metabolism and that, on the other hand, arthritism, in the course of which eczema often appears, is connected with defective action of the thyroid apparatus.

The Mortality from Alcohol.

In accordance with an opinion expressed some two years ago by the Academy of Medicine M. Fernet read at a meeting held on Nov. 19th the result of an inquiry undertaken at a certain number of hospitals. Here are his conclusions. Alcoholism, which in France is one of the most terrible scourges of the present day, is also one of the chief causes of death. It is the practical cause of a third of the total number of deaths. It is the principal or the sole cause of death in one-tenth of the whole number of deaths and it is an accessory cause in more than two other tenths. It is connected with more than half the total number of deaths among foreigners.

The New Dean of the Faculty of Medicine.

As the term of office of M. Debove, the present Dean of the Faculty of Medicine, comes to an end on Dec. 13th the Faculty proceeded on Nov. 21st to elect his successor. As Professor Debove had expressed his wish not to enter upon a new term of office Professor Landouzy was by a very large majority of the votes elected as Dean for the coming three years, or, to be more exact, proposed for this post on the approbation of the Minister. Professor Landouzy is at the present time professor of clinical medicine at the Hôpital Laennec and formerly for some time held the chair of therapeutics. He is the assessor of the present Dean and one of the two representatives chosen by the Faculty for the Council of the University. He is well known and universally esteemed as a learned man whose energy and intellect are both active and far-reaching. He has taken an active part in organising the struggle against tuberculosis and is an earnest worker in various questions of social hygiene, the feeding of the working classes, and the anti-alcoholic propaganda. For some ten years he has organised the annual medical excursion to the French thermal stations.

Société Universelle d'Études Psychiques.

At a general meeting of the above society held in Paris on Nov. 16th the following members were elected to the central committee, the composition of which is as follows: Perpetual President: Dr. P. Joire. Vice-Presidents: Dr. le Menant des Chesnais, Dr. E. Allain, and Dr. Demonchy. General secretary: M. de Vesme, editor-in-chief of the *Annales des Sciences Psychiques*. Assistant general secretary: M. Dhuique, ingénieur chimiste. Treasurer: M. P. Douchez.

The Rearing of the Children of Morphino-maniacs.

At a meeting of the Academy of Sciences held on Nov. 18th M. Bize read a paper on the above subject, in which he pointed out that the children of morphino-maniacs are exposed to grave and even fatal risks owing to the sudden deprivation of morphine at the moment of their birth. When a morphino-maniac becomes pregnant it is therefore necessary to diminish the quantity of morphine which she takes, gradually and constantly. After birth the child should be given preparations of opium strictly proportional to the quantity of morphine which is taken by the mother and to the symptoms of morphine deprivation which the child exhibits. As the mother's milk contains morphine it is as well that the child should not be suckled by her.

Dec. 2nd.

ITALY.

(FROM OUR OWN CORRESPONDENT.)

Death of Professor Sella.

ON Nov. 26th the Roman University was closed in token of respect for Alfonso Sella whose bright, if brief, career had been extinguished on the previous day. Cerebral hæmorrhage, which had rendered trephining necessary, was the cause of death, the faint hope of a successful issue from the operation having proved deceptive. Barely turned 40 years of age, he had compressed into his student and professorial life as much work, and that of a superior kind, as many votaries of nature-study achieve by the time they have reached the "seventies." He inherited from his father Quintino Sella, one of Italy's greatest statesmen, a love of science, abstract and applied, which carried him with special distinction through the mathematical and physical curriculum of the University of Turin. Like his sire he took his annual holiday in the Alps, where, in his seventeenth year, he was the first to scale the summit of the Dent-du-Midi; and he found another pastime in aeronautic adventure, a field in which he had many followers, in conjunction with whom he founded the "Società Aeronautica Italiana." Having graduated with first-class honours at Turin he proceeded to Göttingen and there distinguished himself even among the best of his Teutonic compeers. For the ten years between 1889 and 1899 he acted as assistant to the Senator Pietro Blaserna in the Roman "Istituto di Fisica," after which he was made professor extraordinary of experimental physics in the university. From that post after a year's brilliant success in the class-room and the laboratory he was promoted ordinary professor of the same subject, giving also post-graduate instruction (the so-called "Corso di Perfezionamento") to those students who were to make pure and applied physics the business of their lives. An accomplished mathematician and chemist he did much for the preliminary training of the medical undergraduate, instilling into all a love of nature-study for its own sake as well as for its beneficent influence on the "mens medica," of which in its higher developments he ever spoke with admiration. His papers, read and discussed before the scientific congresses, of which he was member or corresponding fellow, were numerous and important, always redolent of independent speculation and thorough research. Among these may be mentioned his study on "L'Influenza dei Raggi Röntgen e della Luce Ultra-Violetta sulle Scintille" (a masterly paper) and his "Ricerche sulla Radio attivita dell' Aria." To him, in concert with Guglielmo Romiti, Professor of Anatomy and Embryology in the University of Pisa, Italy owes her "Association for the Advancement of Science," organised on British lines and convened for the first time in September last at Parma, where in all its sections it achieved a gratifying success. Even fine art, music especially, had its share of his leisure, the Bach Society in Rome having been started on his initiative and numbering yearly accessions to its membership, thanks to his energy as secretary. On the 26th his remains were followed by an

impressive train of mourners, academic, professional, and civic, to the railway terminus, whence they were transported to Piedmont for interment in the family vault of the Sellas at Oropa. As I write I am informed that a committee—composed of Professor Blaserna, Professor Cerutti, Professor Reyna, Professor Volterra, and the Rector of the University, Professor Tonelli—is taking steps to place a memorial of him in the "Istituto di Fisica"—to wit, a bust in marble, the execution of which has been entrusted to the sculptor, Ezechiel.

Tobacco Smoke as an Antiseptic.

Like alcohol, tobacco has its assailants in Italy, as in other countries; it has also, like alcohol, its apologists, some of whom are insisting on its efficacy as a "microbicide." Following up the researches of Arnold in Germany Italian hygienists are showing that, while the smoke produced by the combustion of vegetable fibres has a more or less destructive effect on ordinary micro-organisms tobacco smoke has a quite special, certainly a more active, bactericidal power, and that in virtue of substances contained in the leaf itself. Passing a current of tobacco smoke across a pledget of cotton-wool impregnated with numerous microbes recognised as the agents of infective disease they found (in confirmation of Arnold's findings) after a brief interval, by means of the usual cultures, that very few of those micro-organisms had survived the ordeal. That which was the first to succumb was the streptococcus, next in order that of diphtheria, then that of typhoid fever, followed by those of cholera and tubercle.

Nov. 30th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

A New Device of the Antivivisectionists.

WITH a persistence worthy of a better cause the antivivisectionists maintain their opposition to modern methods of experimental medicine and for the purpose of their propaganda they have quite recently hit upon a novel way of canvassing. Nearly all medical men in certain districts, especially those remote from the centres of research, have received by post pamphlets in which they are requested to sign their names to a petition to be forwarded to the Houses of Parliament asking the legislature to pass a Bill regulating vivisection. Under the disguise of a scientific presentment of the case which the practitioners are expected to take in earnest they are to be lured into signing the petition. As the promoters of the idea, a number of names of "doctors" are put down without a single layman, but an examination of the names of these promoters shows that the prominent members of the committee include two "magnetopaths," three owners of "hydros," several dentists, and a few well-known writers of puffing advertisements. The pamphlet is concocted in a very misleading style, enumerating the mistaken results obtained by many experimenters without mentioning the useful knowledge that can only be gained by these means. It suggests that the law should order the appointment of a committee consisting of representatives from a Government official board, from a school board, and from a municipal board to watch over the experiments, whilst only one medical man is to take part in the deliberations of the committee. The object of the experiment is to be explained to the committee and if permission to make the experiment is given it must be limited to this object only and the animal must be killed immediately afterwards. It is furthermore recommended that there should be no appeal against any decision of the committee. This would, of course, come very near putting a complete stop to scientific research on living animals. This ruse must be characterised as an attempt to obtain genuine medical signatures to a petition hostile to researches which are essential to the advancement of medical knowledge.

A Proposed Hospital for Accident Cases.

By the death of the famous surgeon, Professor von Mosetig, who was accidentally drowned in the Danube about six months ago, an appointment became vacant at the clinic of which he was director. It has been kept open without any professor being appointed to it until the purpose to which it will in future be applied has been decided on. A committee of the surgeons of the General Hospital has now forwarded a petition to the Government recommending the conversion of the former Mosetig Clinic into an accident hospital which could at once admit any urgent case brought in by the street ambulances. Hitherto the ambulances have often been obliged to go from one hospital to another before they could find accommodation for their patients. If the present scheme is put in practice, and there is every reason to expect that it will be, the surgical wards will be transformed into the accident wards at a small cost. There are 110 beds available, a number which is sufficient to enable the hospital to be subdivided into surgical and medical emergency wards. From this intermediate station the patients would be transferred into one of the ordinary surgical or other stations as required, whilst the cases not requiring confinement to bed could be treated as out-patients. Furthermore, a novel opportunity of teaching and learning would be available; the military authorities have already made arrangements with the director of the General Hospital to attach ten military surgeons every eight weeks to this accident hospital, and the volunteer street ambulance corps (*freiwillige Rettungsgesellschaft*) will also send in turn some of its younger surgeons to learn there. As regards the number of beds, it is worth while to state that the cases of severe surgical accidents have increased from 680 in 1895 to 3205 in 1906, and that last year the corps rendered aid to 5030 medical patients, including cases of poisoning, suicide by drowning or otherwise, burns, cerebral hæmorrhage, and heart disease.

A Medical Automobile Club.

A medical automobile club has been formed in Vienna with the object of procuring cheap motor vehicles for practitioners. The idea is that the large number of the vehicles at the disposal of the club would render it possible for individual members to hire or to buy them at rates not higher than those paid at present for horse drawn vehicles. As the idea is receiving the support of some influential physicians and a good firm of manufacturers its success is likely if the prices go down. At present in this city the total outlay in connexion with an automobile is much greater than when a pair of horses and a carriage are kept.

Acute Syphilitic Aortitis.

An interesting combination of syphilitic lesions was shown by Dr. Fein at a recent meeting of the Gesellschaft der Aerzte. The patient was 20 years of age and had contracted syphilis six months ago and he now complained of cardiac trouble and loss of voice. Examination revealed stenosis and insufficiency of the mitral valve and a complete paralysis of the left vocal cord. The x rays showed the presence of a dilatation of the heart and a pulsating broad vessel corresponding with the aorta but no other signs of aneurysm. There were no means of deciding whether it was the mitral disease or the dilatation of the aorta which was responsible for the loss of voice. Under a course of mercury the patient's vocal cord regained its normal motility, his voice returned, and his cardiac symptoms disappeared almost completely. In making the differential diagnosis the points relied on were that dilatation of the heart has been proved by Ertner, Schrötter, and Alexander to produce compression of the recurrent nerve, and that the patient was suffering from either syphilitic neuritis or acute syphilitic inflammation of the aorta, with secondary dilatation and pressure on the nerve. The x rays showed that simultaneously with the improvement of the voice the dilatation of the aorta diminished until no pressure at all was exerted on the recurrent nerve. If there had been no loss of voice the aneurysmal condition of the aorta might have escaped detection and in the course of a few months would have become permanent. Dr. Fein was therefore induced to classify the case as one of syphilitic disease of the aorta. He was of opinion that in all cases of syphilis showing cardiac symptoms special attention should be given to those conditions at an early date after infection, for it was possible in this stage to avert the threatened danger by energetic antisyphilitic treatment.

Nov. 30th.

THE annual dinner of the London (Royal Free Hospital) School of Medicine for Women will take place on Wednesday, Dec. 11th, at the Café Monico, Piccadilly-circus, at 6.45 for 7.15 P.M. Mrs. Mary Scharlieb, M.D., M.S., will preside.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Public Health Bill.

IN Western Australia a Public Health Bill submitted to Parliament contained some curious clauses which were protested against by a deputation of the Perth branch of the British Medical Association. Clause 266 read: "Any death resulting either directly or indirectly from any surgical operation should be forthwith reported to the nearest magistrate who would inquire into the circumstances and determine whether an inquest was necessary." Clauses 196 and 197 required a medical practitioner to report the case of any patient suffering from "tuberculosis, syphilis, or any other infectious or contagious disease." After hearing the deputation the Colonial Secretary said that he would give consideration to their views but he thought that Clause 196 was good and would not agree to lose it altogether. Clause 266 was stated to have been inserted principally at the request of several medical practitioners in the metropolitan area who represented to him that some members of the profession took unnecessary risks. The Colonial Secretary said he was now rather persuaded that the clause was not workable.

Mental Disease.

A new receiving house has just been built by the Victorian Government and taken over by the Inspector-General of the Insane. The building has cost nearly £15,000 and will be used as an observation hospital. Persons other than criminal lunatics who are at present remanded for medical observation from the courts, or harmless cases at present sent directly to the asylums, will in future be treated at the receiving house. Two months is the maximum period of probation. The institution is modelled on that established in New South Wales by Dr. F. N. Manning. It provides accommodation for 15 women and 25 men and is pleasantly situated in the Royal Park, about two miles from the centre of Melbourne. Cases proving unsuitable for this establishment but not likely to prove incurable will be sent on to the new Acute Mental Diseases Hospital.

Double-headed Infant.

A curious action has just been concluded in the district court at Sydney in which the issue was the possession of the remains of a double-headed fœtus. The plaintiff, a showman, sued a sub-inspector of police for the wrongful detention of a jar containing a chemical fluid and "a certain scientific exhibit—namely, a baby with two heads." It appeared from the evidence that the police had seized the specimen which was on public exhibition. It was stated that the jar and its contents had been purchased by the plaintiff's father some forty years previously at the sale of a medical man's effects in New Zealand. The judge decided that there was no property in a corpse in the circumstances and gave a non-suit for the defendant.

Tropical Disease.

The Commonwealth Government for the last two years has paid an annual subsidy of £200 to the London School of Tropical Medicine. A scheme was recently proposed by the Bishop of North Queensland for establishing a school of tropical medicine at the Townsville Hospital. This has been adopted by the Universities of Sydney, Melbourne, and Adelaide, which are to have joint interests, and the Commonwealth has placed a sum of £450 on the estimates for the assistance of the new project which will probably come into being at the end of the present year. The contribution to the Imperial School will also be continued as it is paid under an agreement for a period of five years.

Sanatoriums for Consumptives.

The managers of the Victorian Sanatoriums for Consumptives recently made a request to the Government for increased monetary assistance. The inspector of charities reported that this should not be granted until the sanatoriums were conducted purely as charitable institutions, there being at present two classes of patients received, paying and non-paying. Dr. Norris, chairman of the Board of Health, in a general report on the subject stated that the number of consumptive patients suitable for sanatorium treatment in Victoria was not less than 2000 annually. The Government Sanatorium at Greewall provided 70 beds only; therefore it was clear that existing accommodation was inadequate and he supported an increased grant if the Victorian Sanatoriums were placed on a charitable basis. Hitherto the Victorian Sanatoriums comprised two establishments, one at Echuca and a second at Mount Macedon, and patients spent the winter at the former but were transferred to the latter during the summer. This practice was condemned by Dr. Norris as involving great expense without offering compensating advantage.

Vital Statistics.

The Victorian Government statist estimates the population of Victoria on Dec. 31st, 1906, as 1,237,998, consisting of 620,380 males and 617,618 females. The increase for the year was 19,247. The population of Melbourne and suburbs was 526,400. The number of persons naturalised in 1906 was 301, of whom 115 were Germans. The density of the population in Melbourne is only 3·22 persons to the acre, while Sydney has 5·91.

An Ethical Matter.

At the time of King Edward's illness the daily papers interviewed a number of medical men in Sydney as to the nature and course of the disease. The local branch of the British Medical Association thereupon passed a resolution to the effect—

> That no member of the New South Wales branch of the British Medical Association shall allow himself to be interviewed on professional matters by representatives of the lay press without a written undertaking that his identity shall not be published.

In 1905 the Australasian Medical Congress passed resolutions to the effect—

> (1) That it is unethical that auto-biographical or biographical notices of medical practitioners should appear in the lay press during their lifetime.
>
> (2) That it is unethical for medical practitioners to grant interviews to representatives of the lay press on medical matters in connexion with which their names are allowed to appear.

These rules have at times been honoured rather in the breach than the observance and recently a movement has been made to modify them. The matter has not yet reached discussion but is to be brought up again in Sydney.

Nov. 1st.

Obituary.

HUBERT MONTAGUE MURRAY, M.D. LOND., F.R.C.P. LOND.,

SENIOR PHYSICIAN TO CHARING CROSS HOSPITAL AND TO THE VICTORIA HOSPITAL FOR CHILDREN.

IT was with great regret that we had to chronicle in our last issue the death of Hubert Montague Murray, senior physician to Charing Cross Hospital and to the Victoria Hospital for Children, Chelsea, at the early age of 52 years. Born in London, Dr. Murray spent his school days at Camden House, Brighton, where he early displayed his organising abilities and was chosen captain of the cricket eleven for his managing powers as well as for his skill at the game. His medical training was obtained at University College Hospital where again he entered with enthusiasm into the pursuits of his compeers, taking a specially active part in the affairs of the Hospital Medical Society, of which he was ultimately elected President. As a student he carried off the "Blue Ribbon" of the school prizes, the Fellowes Clinical Gold Medal. After qualifying Dr. Murray held the usual resident appointments, becoming out-patient assistant to the late Mr. Streatfield in 1880 and house physician to the late Dr. Wilson Fox for the latter part of the same year. Later, in 1882, he held the post of house surgeon to the late Mr. Berkeley Hill.

In 1883 he was appointed medical registrar at Charing Cross Hospital and shortly afterwards electrical physician. In the following year he became assistant physician, to which post he joined that of pathologist to the hospital in 1887. He was elected to the post of lecturer on pathology in the Medical School in 1888 and passed through the full *decursus honorum* there, becoming successively vice-dean (1890), medical tutor (1894), lecturer in practical medicine (1894), and ultimately dean of the Medical School in 1895. In 1900 he became lecturer on the principles and practice of medicine, which office he held to the time of his death. He continued to see out-patients at the hospital till 1903,

promotion being at that time slow. Throughout this long period of some 19 years, which to many would have become irksome, he continued to exhibit a keen interest in his hospital work and to make full use of the available clinical material for teaching purposes. In 1903 Dr. Murray succeeded to "beds" in the hospital and in 1906, on the retirement of Dr. J. Abercrombie, he became senior physician.

Dr. Murray's connexion with the Victoria Hospital for Children dated from the year 1889 and he continued to see out-patients there till 1897, when he became at once senior physician to the hospital on the retirement of Dr. Ridge Jones. His connexion with both hospitals coincided with important periods in their development, as at both institutions schemes of enlargement and rebuilding were carried out, and at both alike Dr. Murray's unwearying interest and wise advice were of the greatest value to the governing bodies. In addition to the posts already mentioned Dr. Murray was consulting medical officer to the Foundling Hospital and medical referee to the Guardian Assurance Company. His interest in children and their welfare was further exemplified by his frequent attendance at the meetings of the Medical Officers of Schools Association. He was an examiner in medicine to the Conjoint Board and to the University of London, and on the very morning of his death he was invited by the University of Liverpool to accept a similar post. In 1905 he was appointed clinical teacher to the Royal Army Medical College. Dr. Murray was a Fellow or Member of the Royal Medical and Chirurgical, Medical, Clinical, Pathological, and Neurological Societies of London, but rarely contributed to their Transactions. Equally rare were his contributions to the medical journals, though when prevailed upon to write his papers were marked by wide knowledge and acute observation. Of his literary work the best-known perhaps are the two editions (eighth and ninth) of Dr. T. Henry Green's "Introduction to Pathology and Morbid Anatomy" which he brought out in 1895 and 1900 respectively. The latter he practically rewrote and added to it a large number of original illustrations, mostly reproduced from photomicrographs which he had himself taken. He also edited the third edition of Quain's "Dictionary of Medicine" (1902), his invariable modesty being here shown in the small number of the articles which he claimed for his own share. As a writer his style was clear and telling, careful and polished, with no redundancy of words. As a teacher he was sound, lucid, and interesting, more at home perhaps with senior students than with those needing quite elementary instruction: his very breadth of view prevented him from attaining to that dogmatic precision which marks the teacher as opposed to the thinker. As a physician he was noteworthy for his careful examination of cases of disease, while his diagnosis, founded on this and on a wide experience, was unusually trustworthy and accurate. His versatility and power of keeping abreast of recent advances in science were illustrated by his immediate appreciation of the value of the x rays on their first discovery, and he was one of the first to introduce this method of investigation into private practice.

It is difficult to put into words the qualities of heart and head which caused Montague Murray to be held in such affectionate regard by all who knew him well. Foremost among them were a warm-hearted sympathy and a breadth of view which enabled him at once to enter into the views of others and to see the problems of everyday life in true perspective and proportion. Joined to these qualities were a rare tact in the management of men, a temper that was never ruffled, and a courtesy of manner that disarmed resentment. Thus it came about that Dr. Murray was ever the chosen counsellor of those who were in difficulty, a friend ever ready to dispel misunderstanding, to sooth ruffled feelings, and to reconcile opposing views in some equable compromise. A loyal friend who was never accused of going back upon his word; a tactful advocate in defending an indiscreet subordinate or supporting a candidate of whose worth he was assured; a lenient judge, ready to make allowances and to appreciate difficulties; a wise counsellor in matters of doubt; a skilled opponent in debate, ever ready to take advantage of a weak point in an adversary's argument, yet never unwilling himself to be convinced when counter-arguments prevailed—such were some of the characteristics for which he will be long remembered. And to these abilities he added that keen sense of humour which is too rare in men of serious purpose. His friends will long remember the infectious smile with which he scored a point or told some good story. The trace of a stammer which he never quite lost, though he had overcome any serious degree of the affection, seemed often to add piquancy to a repartee or an anecdote.

A hard worker during most of the year Dr. Murray fully appreciated his holiday months. These he often spent on the Continent, where in early life he took walking tours and where he enjoyed equally a visit to a noted cathedral and a scramble among the lower slopes of the Alps. An amateur photographer of considerable skill he brought back many striking photographs of scenes which he had visited.

Dr. Murray was twice married: first to Florence, daughter of Mr. John Matthew Voss, and secondly to Winifred, daughter of Mr. Edward Pearl, who survives him. He leaves behind a son, now at Westminster School, and an infant daughter. A deeply religious man, he was a well-known member of the Congregational Church of the King's Weighhouse, Duke-street, Grosvenor-square, of which he was also treasurer. Here a memorial service was held on Nov. 28th which was attended by his colleagues from both hospitals, by many of the governors and students, and by a large number of friends.

DANIEL HOOPER, B.A. CANTAB., M.B. LOND., M.R.C.S. ENG., M.R.C.P. LOND., L.S.A.

Dr. Daniel Hooper, the senior Member of the Royal College of Physicians of London, passed away at the ripe age of 84 years, on Nov. 24th. He was the son of Mr. Cleeve Hooper of Bermondsey and was educated at Mr. Abbott's School, Hitchin. Thence he went to Caius College, where he took his B.A. degree and subsequently became a student of Guy's Hospital. After obtaining the diplomas of L.S.A. and M.R.C.S. Eng., he took in 1848 the degree of M.B. of the University of London and distinguished himself by gaining first-class honours in physiology and comparative anatomy, in surgery, and in medicine. In surgery he was placed third and in medicine he obtained the second place and was awarded a gold medal. He became a Member of the Royal College of Physicians in 1851 and started consulting practice in the Borough, for the most part in Trinity-square, and in the house in which he died. He was attached for more than 56 years to the Surrey Dispensary as visiting physician and for 52 years to the Public Dispensary, successively in Carey-street, Lincoln's Inn, in Stanhope-street, and in Drury-lane. These institutions he continued to serve until, in the early part of last year, he was obliged to take to his bed, to which he had been confined till the final event. He was well known in the south of London, where he had at one time a large practice, and was much respected by the many old Guy's men who knew him and by those with whom he worked at either dispensary or in the neighbourhood in which he spent his life. He had been a widower nearly 20 years and he leaves no family.

ADOLPHE WAHLTUCH, M.D. KIEFF, L.R.C.P. LOND.

Dr. Adolphe Wahltuch of Manchester died on Nov. 25th after a long illness at his residence in Moon Grove, Rusholme, in that city. He was born in Odessa in May, 1837, his father being an Austrian and his mother of French extraction. He graduated as M.D. at the University of Kieff in the South of Russia and soon afterwards came to London where he studied at the Middlesex Hospital. In 1863 he was admitted L.R.C.P. Lond., and in a short time settled in Manchester, where he passed the remainder of his life. Here he held several professional appointments, including those of physician to the Hulme Dispensary, physician to the Victoria Jewish Memorial Hospital at Cheetham-park (established in 1905), and lecturer on physiology and hygiene to the Kindergarten Association. He had also been President and honorary librarian of the Manchester Clinical Society and President and honorary secretary of the Manchester Medico-Ethical Association. He was the author of several medical treatises and contributions to periodicals. Dr. Wahltuch was one of the founders of the Manchester Crematorium Society. He spoke several continental languages fluently. His chief recreation was chess and for some years he was chess editor of the *Manchester Weekly Times*. He leaves a widow and four sons and three daughters. The funeral took place on Nov. 28th at the Manchester Crematorium and was attended by a large number of friends and representatives of various institutions with which the deceased had been connected.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are

announced:—Dr. Folet, professor of surgery in the University of Lille.—Dr. Sienetz, formerly professor of general therapeutics in the University of Warsaw.—Dr. von Mühlig, an eminent German physician in Constantinople.—Dr. Clément of the Lyons Hospitals.—Dr. Sinitsin, formerly professor of surgical pathology in the University of Moscow.

Medical News.

UNIVERSITY OF OXFORD.—In the Examination in Preventive Medicine and Public Health the following candidates have passed:—

Part I.—G. J. Buchanan, R. V. Clark, and E. S. Jones.
Part II.—R. V. Clark, P. de Mello, and J. P. Tildesley.
The diploma has been issued to the three last-named candidates.

FOREIGN UNIVERSITY INTELLIGENCE.—*Göttingen:* Dr. Schultze has been recognised as *privat-docent* of Pathological Anatomy.—*Greifswald:* Dr. Max Henkel of Berlin has been appointed Professor of Midwifery and Gynæcology in succession to Dr. O. de la Camp.—*Halle:* Dr. Loening has been recognised as *privat-docent* of Medicine.—*Prague (Bohemian University):* Dr. W. Pitha, *privat-docent* of Gynæcology, and Dr. E. Babák, *privat docent* of Physiology, have been appointed to Extraordinary Professorships. Dr. M. Mladejowsky, *privat-docent* of Balneology and Climatology, has been granted the title of Extraordinary Professor.—*Vienna:* Dr. Otto Grosser, *privat-docent* of Anatomy, and Dr. Oskar Stoerck, *privat-docent* of Pathological Anatomy, have been promoted to Extraordinary Professorships. Dr. Benjamin Gompertz, *privat-docent* of Otology; Dr. Julius Schnitzer, *privat-docent* of Surgery; Dr. Artur Klein, *privat-docent* of Medicine; Dr. Wolfgang Pauli, *privat-docent* of Medicine; Dr. Ludwig Mandl, *privat docent* of Gynæcology; and Dr. Alexander Pilcz, *privat docent* of Psychiatry, have been granted the title of Extraordinary Professor.

ROYAL SANITARY INSTITUTE.—A provincial sessional meeting of this institute will be held in the Municipal School of Technology, Manchester, on Friday, Dec. 13th, at 7 P.M., when a paper will be read on Butter Supply by Mr. T. Wilson, the manager of the butter department of the Coöperative Wholesale Society at Manchester. The paper will be followed by a debate in which Dr. Meredith Young, medical officer of health of Stockport; Mr. Robert Bell, assistant prosecuting solicitor to the Manchester corporation; and Mr. A. T. Rook, superintendent of the Sanitary Department, Manchester, will take part. A paper will also be read on Small Dwellings by Professor J. Radcliffe, M.Sc. Tech.

NATIONAL DENTAL HOSPITAL.—The annual dinner of the past and present students and staff of the National Dental Hospital was held at the Trocadéro Restaurant, London, W., on Nov. 29th, Mr. Charles W. Glassington occupying the chair. During the proceedings the successful students were presented with the prizes awarded in the session 1906–07. Amongst the winners were two lady students. In the course of his remarks the chairman, in proposing the toast of "The National Dental Hospital and College," referred to the excellent teaching capacity of the institution, but he regretted to say that the work was severely handicapped owing to want of funds and to lack of students. He drew attention to the efforts which were being made to stop dental quackery and acknowledged in this connexion the work of the Medical Defence Union, the London and Counties Medical Protection Society, and the British Dental Association. The toast was replied to by Mr. P. Sidney Spokes, the Dean, who said that in regard to funds the hospital was not so badly off as last year, while he regarded the small number of entries of students to be due to the provision of dental teaching in the provincial schools. The excellent results of the pass-list afforded proof of the satisfactory teaching at the hospital and college. He thought that they were protected best from the quack by the fact that that person could not call himself, or imply that he was, a qualified dentist. The toast of "The Past and Present Students" was proposed by Professor S. A. Underwood who suggested some excellent rules for the guidance of students commencing the dental curriculum, and he concluded by recommending that men should set apart a time for play as well as work. The toast was responded to by Mr. J. A. Rose and Mr. L. E. Hitchcock. Sir Francis Lovell responded to the toast proposed by Mr. Herbert J. Relph, "The Visitors," and congratulated the hospital on its philanthropic and educational work. Referring to his experience in the colonies and elsewhere, he said that none of the hospitals had a dental surgeon upon its staff, a condition of things which he thought should be remedied. He suggested also that dental surgery should be represented in the London School of Tropical Medicine. After a vote of thanks to the chairman, which was most cordially given, the proceedings terminated.

THE MIDDLESEX HOSPITAL.—At a court of the governors of the Middlesex Hospital held in the board-room on Dec. 2nd the chairman, Mr. Henry Morris, President of the Royal College of Surgeons of England, referring to the efforts which were being made to complete the endowment of the cancer wing of the hospital and the research work carried on there, expressed a hope that the department would be placed in an absolutely independent position. The work of the Imperial Cancer Research Fund, with which he was connected, and the work carried on at the hospital were both of the utmost importance.

DONATIONS AND BEQUESTS.—Sir Frederick Wills, Bart., has promised £3000 towards the cost of providing a new administration block and out-patients' department for the Royal Boscombe and West Hants Hospital, Bournemouth, conditionally that another £2000 to meet the total cost of the undertaking is raised by the end of June, 1908.—Mr. Francis Reckitt, brother of Sir James Reckitt, has presented £10,000 to the Great Northern Central Hospital, Holloway-road, N., for the purpose of building a convalescent home in connexion with the hospital.—Under the will of the late Lady Brampton the Hospital of St. John and St Elizabeth, St. John's Wood, N.W., will receive a legacy of £10,000.—The late Mr. F. F. Brown of Stoke Bishop, Bristol, has bequeathed £500 to the Cardiff Infirmary and £250 to the Bristol Royal Hospital for Children and Women.

EXHIBITION OF ELECTRICAL APPARATUS.—The annual conversazione and exhibition of new apparatus, heretofore held under the auspices of the late British Electro-Therapeutic Society but now under the Electro-therapeutical Section of the Royal Society of Medicine, will be held in the Queen's (small) Hall on Friday, Dec. 13th. The conversazione will be held from 7.30 P.M. to 11 P.M., while the exhibition will be open from 3 P.M. and light refreshments will be provided both in the afternoon and evening. All the leading makers of electro-medical and x ray apparatus are taking part and many new designs will be shown—as far as possible under working conditions. A noteworthy feature will be a display of x ray tubes from the earliest to the latest patterns. Medical practitioners will be welcome on presentation of their visiting cards, as also will members of the dental profession and recognised teachers of the physical sciences. Others will be admitted on payment of a fee of 5*s*. Communications regarding cards of admission or other matters should be addressed to Dr. E. Reginald Morton, honorary secretary, 22, Queen Anne-street, Cavendish-square, London, W.

THE TEETH OF SCHOOL CHILDREN.—On Nov. 29th a public meeting was held at the Guildhall, Cambridge, under the presidency of the Mayor, Mr. Whibley, to explain a scheme which has been started for the better treatment of children with defective teeth. At Cambridge, owing to the advocacy of Dr. George Cunningham, the practical help of Mr. Sedley Taylor, and the support of Dr. J. H. C. Dalton and others, a dental institute has been opened where a qualified dentist will attend for the purpose of treating the teeth of school children. As explained by the Mayor, Mr. Sedley Taylor has promised £500 for the scheme which has attracted the attention of the medical department of the Board of Education which was represented at the meeting by Dr. Alfred Eichholz. The governors of Addenbrooke's Hospital have placed a room at the disposal of the dental committee for extractions. Nothing whatever is done to any child without the consent of the parents. On the motion of Professor Howard Marsh, the Master of Downing, a proposal was adopted declaring that children attending the elementary schools urgently needed professional dental treatment of a preservative character. As a professor of surgery in the University,

as one who was formerly head of the Children's Hospital for 25 years, and as a surgeon at St. Bartholomew's Hospital for many years, he was glad of the opportunity of saying that he considered this movement one of the highest possible importance.

DEATH OF A CENTENARIAN.—The *Times* of Nov. 28th states that Mrs. Sarah Lamb died recently in the St. Pancras workhouse at the reputed age of 105 years. The cost of a private funeral was defrayed by the official staff and a special memorial service was held in the workhouse chapel.

LITERARY INTELLIGENCE.—The Caxton Publishing Company announces an Atlas of Obstetrics to which the stereoscopic method has been applied throughout. The work is edited by Dr. G. F. Barbour Simpson, senior assistant to the professor of midwifery in the University of Edinburgh, and Dr. Edward Burnett. The work will be on the same lines as "The Edinburgh Stereoscopic Atlas of Anatomy."

IN MEMORY OF PIROGOFF.—The committee formed by the Moscow town council for the purpose of elaborating a scheme for the commemoration of Pirogoff has now determined to suggest, says the *Novoe Vremya*, that the Tzaritizinsk-street near the surgical clinic be called in future Pirogoff-street, that the First Town Hospital be named after him, and that a prize of £60 be founded for the best work on surgery, to be awarded every three years.

POISONING BY BORIC ACID.—An inquest was held at Yelverton, Devon, relative to the death of a domestic servant, aged 27 years. Evidence showed that the deceased, who was pregnant, had taken boric acid. The medical attendant, who had made a post-mortem examination, and the public analyst for Plymouth, who examined the contents of the stomach, stated that death was due to the boric acid. The jury returned a verdict that the deceased had "feloniously killed herself by taking boric acid, that is, a verdict of *felo-de-se*."

HOSPITAL SUNDAY FUND IN BRISTOL.—A meeting of the committee of the Lord Mayor's Hospital Sunday Fund was held at the Bristol Guildhall on Nov. 25th. It was stated that in 1907 the collections amounted to £1754, of which £1667 were distributed among the medical charities, and after paying necessary expenses a balance of £37 remained. During the ten years which have elapsed since the Fund was started the collections have amounted to £16,500. At first the collections were obtained from 92 places of worship but this year the number was 510.

NURSING HOME FOR CRIPPLED CHILDREN.—The Birmingham Crippled Children's Union has long desired to obtain a hospital for the open-air treatment of crippled children and the hopes of the society have been materialised by Mr. George Cadbury's munificent gift of the house and grounds known as the Woodlands. The house is situated at Northfield, within easy reach of the city. It contains 50 rooms, is surrounded by four acres of well-laid-out grounds, and is admirably adapted for the purpose to which it is devoted. The small convalescent home which the society already possessed will probably be closed, children will no longer have to be sent long distances away, and the saving made by these changes will provide about £200 for the maintenance of the new hospital. It is obvious, however, that as there will be accommodation at the Woodlands for over 150 children, additional means will have to be provided if the full value is to be obtained from Mr. George Cadbury's gift.

THE SURGICAL AID SOCIETY.—On Dec. 2nd the 45th annual meeting of the Surgical Aid Society was held at the Mansion House, under the presidency of the Lord Mayor. The annual report stated that the net income of the past 12 months was £22,895, a decrease of £1674 as compared with the previous year's total, but an increase of £2108 upon that of the preceding year. The King had once more increased his annual subscription, thus giving further proof of his practical interest in the charity. The expenditure for the year amounted to £19,024 which was £469 in excess of the expenditure of the previous year. The number of patients relieved during the year was 24,495, an average of 471 per week or nearly 80 per working day. In opening the proceedings the Lord Mayor said that the efforts of the organisation were not confined to London for there were 16 branches in the provinces which were doing good work, their contributions during the year amounting to £3207. The report was adopted on the motion of Mr. Alderman and Sheriff Burnett, seconded by Sir John Kirk.

Archdeacon Sinclair will address the patients of the Royal Hospital for Incurables, Putney Heath, on Wednesday, Dec. 11th, at 4 P.M.

UNIVERSITY COLLEGE HOSPITAL.—On Wednesday evening, Dec. 11th, Sir Almroth Wright, F.R.S., will read a paper before the Medical Society of the hospital on the Feeding of Infants and Invalids. The chair will be taken at 8.30 P.M. by Professor Sidney Martin, F.R.S., and medical men are invited to attend.

VACCINATION FEES.—At a meeting of the Bath board of guardians held on Nov. 27th the finance committee reported in favour of not reducing the fees of the public vaccinators. An amendment was moved that the fees should be reduced; this was, however, defeated, 20 members of the board voting for and 23 against it. The recommendation of the committee was subsequently adopted.

A RECEPTION was held at the Incorporated Institute of Hygiene at 33, Devonshire-street, on Wednesday evening, Dec. 4th. The guests, who were numerous, were received by Sir William Bennett, K.C.V.O. Various exhibits were on view, divided into sections—viz., clothing, food, beverages, domestic hygiene, hospital, and medical. There was also a demonstration in bacteriology, illustrating a day's work in a hospital bacteriological department. Bioscopic views were also shown. Popular features were the samples offered by exhibitors and the Oriental bags provided to hold them.

ST. BARTHOLOMEW'S HOSPITAL.—On Thursday, Dec. 5th, Lady Ludlow, wife of the Right Honourable Lord Ludlow, treasurer of the hospital, laid the foundation-stone of the new pathological block. Lord and Lady Ludlow were received in the committee room of the hospital by the Almoners; Dr. Norman Moore, senior physician; Mr. W. H. Cripps, senior surgeon; Miss Stewart, the matron; and Mr. T. Hayes, the clerk. Lady Ludlow having accepted a bouquet from the governors was then conducted to the site of the new block and the dedicatory prayers were said by the Venerable the Archdeacon of London. An address was then read by the clerk, to which Lady Ludlow replied, and Mr. E. B. I'Anson, the architect, then presented her with a mallet and trowel. The stone was then duly laid. It bore the following inscription:—

This Stone, which stands on the site of the house of Dame Joanna Astley, Nurse of King Henry VI., was laid by the Lady Ludlow, wife of the Right Honourable Lord Ludlow, treasurer of St. Bartholomew's Hospital, as the foundation of a building devoted to the elucidation of problems in the nature and treatment of the diseases of those who have sought relief from suffering in this Hospital,—5th December, 1907.

THE INFANTS' HOSPITAL, VINCENT-SQUARE, WESTMINSTER.—The committee of this hospital having invited the attendance of medical men to discuss with the staff the advisability of instituting an out-patient department on certain restricted lines, a meeting took place in the lecture room of the hospital on Friday, Nov. 29th, under the chairmanship of Dr. F. J. Allan, medical officer of health of Westminster, who explained that the original intention of the committee was not to have an out-patient department, but he had suggested that perhaps medical practitioners might desire to have consultations at the hospital with regard to patients who could not pay fees for private consultations. Dr. Ralph Vincent, physician to the hospital, having stated that the object of the hospital was to deal solely with infants suffering from malnutrition, it was agreed, after a discussion, that a scheme such as that suggested by the chairman would be desirable under the following conditions:—

1. That the words "out-patient department" be never used in print or verbally. 2. That the department be called "The Consultation Department." 3. That only those quite unable to pay the fee that can be arranged between a consultant and the medical attendant be sent to the hospital for the opinion of a consultant. 4. That if the medical practitioner cannot attend himself at the consultation every patient sent for the opinion of the consultant shall bring a *note* stating the various points in the previous history that may be considered to be of use. 5. That the consultant's opinion and advice be communicated direct to the medical practitioner who sent the patient. 6. That no communication be made to the parents or others in charge of the

patient by the consultant, nor any invitation to attend again be given. 7. That no second or subsequent attendance of the patient be allowed without a further communication from the medical attendant.

These conditions were adapted from those which are believed to work satisfactorily at the Bolingbroke Hospital. At the end of the meeting the wards, laboratory, &c., were visited.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, J. B., ET FILS, 19, Rue Hautefeuille, Paris.

Calculs des Voies Biliaires et Pancréatites. Le Syndrome Pancréatico-biliaire Diagnostic et Traitement. Par le Dr. René Gaultier. Ancien Interne des Hôpitaux, Chef de Laboratoire à la Faculté de Médecine de Paris. Price Fr.1.50.

CHURCHILL, J. AND A., 7, Great Marlborough-street, London.

The Borderland of Epilepsy. Faints, Vagal Attacks, Vertigo, Migraine, Sleep Symptoms, and their Treatment. By Sir William R Gowers, M.D. Lond., F.R.S., Fellow of the Royal College of Physicians of London and Ireland, Hon. M.D. Dublin, Consulting Physician to University College Hospital, Physician to the National Hospital for the Paralysed and Epileptic. Price 4s. 6d. net.

FISCHER, GUSTAV, Jena.

Arbeiten aus dem Königlichen Institut für Experimentelle Therapie zu Frankfurt a M. Herausgegeben von Geh. Med. Rat Prof. Dr. P. Ehrlich. Heft 3 Aus der Experimentell-Biologischen Abteilung. Dr. H. Sachs. Price M.3.

GREEN, WILLIAM, AND SONS, Edinburgh and London.

Green's Encyclopædia and Dictionary of Medicine and Surgery, Vol. VI. Lumbar Region—Nephrotomy. Price 15s. net.

HÖLDER, ALFRED, Wien und Leipzig.

Das Enge Becken. Eine Studie über den Geburtsverlauf und die Indikationen zu Operativen Eingriffen. Von Dr. H. Peham, Privat-dozenten in Wien. Mit einem Vorworte von R. Chrobak. Price M.5.40.

JOHN BALE, SONS, AND DANIELSSON, LIMITED, 83-91, Great Titchfield-street, Oxford-street, London, W.

Studies in Laboratory Work. By C. W. Daniels, M.B. Camb., M.R.C.S. Eng., Director of the London School of Tropical Medicine, Lecturer on Tropical Diseases at the London Hospital; and A T. Stanton, M.D. Tor., M.R.C.S. Eng., D.T.M. & H. Camb., Demonstrator, London School of Tropical Medicine. Second edition, thoroughly revised, with many new and additional illustrations. Price 16s. net.

Syphilis in the Army. By Major H. C. French R.A.M.C., Fellow of the Royal Institute of Public Health, Associate, King's College, London, Member of the British Medical Association, War Office Specialist Appointment in Venereal Diseases and Dermatology, Royal Herbert Military Hospital, Woolwich, Price 6s. net.

LEHMANN, J. F., Heustrasse, 20, München.

Labyrintheiterung und Gehör. Von Dr. Heinrich Herzog. (Aus der K. Universitäts-Ohrenklinik München-Vorstand: Hofrat Prof. Dr. Bezold). Price M.5.

LEWIS, H. K., 136, Gower-street, London, W.C.

The Preservation of Infant Life. A Guide for Health Visitors. Six Lectures to the Voluntary Health Visitors in the Borough of St. Pancras. By Emilia Kanthack. Price 1s. net.

Reminiscences in the Life of Surgeon-Major George A. Hutton, late Rifle Brigade (The Prince Consort's Own), Honorary Organising Commissioner, St. John Ambulance Association. With an Introduction by R. Lawton Roberts, M.D., J.P., Lecturer and Examiner of the St. John Ambulance Association. Price 5s.

A Guide to the Administration of Ethyl Chloride. By G. A. H. Barton, M.D., Anæsthetist to the North-West London Hospital, Throat Hospital (Golden-square), Female Lock Hospital, and Royal National Orthopædic Hospital. Second edition. Price 2s.

LONGMANS, GREEN, AND CO., 39, Paternoster-row, London, E.C.

The King's College Hospital Book of Cooking Recipes. Being a Collection of Recipes contributed by Friends of the Hospital and Published in Aid of the Fund for the Removal of King's College Hospital to South London. Price 1s. net.

Moveable Kidney and Other Displacements and Malformations. By David Newman, M.D., F.F.P.S.G., Surgeon to the Glasgow Royal Infirmary, Ex-President, Glasgow Medico-Chirurgical Society, Ex-President, Glasgow Pathological and Clinical Society. Price 5s. net.

LOTHIAN, T. C., 226, Little Collins-street, Melbourne.

The Laboratory and other Poems. By W. A. Osborne. Price not stated.

MALOINE, A., 25-27, Rue de l'École-de-Médecine, Paris.

Manuel Pratique et Simplifié d'Analyse des Urines et Autres Sécrétions Organiques Par Ernest Liotard, O.I., Docteur en Médecine à Nice, Ancien Interne des Hôpitaux, Pharmacien de 1re Classe, Chimiste (Lauréat). Troisième édition, revue et augmentée. Price Fr.3.

MARHOLD, CARL, Halle a.S.

Der Schlaf des Andern. Eine Naturwissenschaftliche Betrachtung über den Schlaf. Von Dr. Paul Kronthal. Price M.0.80.

MASSON ET CIE, 120, Boulevard Saint-Germain, Paris.

Dr. Beni-Barde. Clinique Hydrothérapique. Silhouettes de Névropathes. Première Série. La Neurasthénie, les Vrais et les Faux Neurasthéniques. Price Fr.8.

MORING, ALEXANDER, LIMITED, The De La More Press, 32, George-street, Hanover-square, London, W.

Wit and Humour of the Physician. A Collection from Various Sources, classified under appropriate Subject Headings. Price 1s. 6d. net.

PROGRÈS MÉDICAL (Aux Bureaux du), 14, Rue des Carmes, Paris. (JACQUES, G., 14, Rue Hautefeuille, Paris.)

Bibliothèque d'Éducation Spéciale. XIV. De l'Absolue Nécessité de l'Assistance des Enfants Anormaux et de ses Résultats au Point de Vue Social. Par Maurice Royer, Docteur en Médecine, Ancien Interne de l'Hôpital du Perpétuel Secours et de la Fondation Vallée (Hospice de Bicêtre). Préface de M. le Docteur Bourneville. Price Fr.8.

SCIENTIFIC PRESS, LIMITED, 28 and 29, Southampton-street, Strand, London, W.C.

A Text-book of Mental and Sick Nursing. Adapted for Medical Officers and Nurses in Private and Public Asylums. By Robert Jones, M.D., B.S. Lond., F.R.C.S. Eng., F.R.C.P. Lond., Resident Physician and Superintendent of the London County Council's Asylum, Claybury, at Woodford Bridge Essex With an Introduction by Sir William Job Collins, M.D., M.S., B.Sc. Lond., F.R.C.S. Eng., M.P., D.L., J.P., Vice-Chancellor of the University of London. Price not stated.

SWAN SONNENSCHEIN AND CO., LIMITED, 25, High-street, Bloomsbury, London, W.C.

Mental Pathology in its Relation to Normal Psychology. A Course of Lectures delivered in the University of Leipzig. By Gustav Störring. Dr. Phil. et Med., now Professor of Philosophy in the University of Zürich. Translated by Thomas Loveday, M.A., lately Professor of Philosophy in the South African College, Cape Town. Price 10s. 6d.

TAYLOR AND FRANCIS, Red Lion-court, Fleet-street, London, E.C.

University College Hospital Medical School. University of London. Calendar. Session MDCCCCVII.-MDCCCCVIII. Price not stated.

Appendix XXI. to the Second Edition of the Descriptive Catalogue of the Pathological Specimens contained in the Museum of the Royal College of Surgeons of England. By Samuel G. Shattock, Pathological Curator of the Museum.

W. B. SAUNDERS COMPANY, Philadelphia and London.

Diseases of the Genito-Urinary Organs and the Kidney. By Robert Holmes Greene, A.M., M.D., Professor of Genito-Urinary Surgery, Medical Department of Fordham University; Genito-Urinary Surgeon to the City and to the French Hospitals, New York City; and Harlow Brooks, M.D., Assistant Professor of Pathologic Anatomy, University and Bellevue Hospital Medical School, Visiting Physician to the City Hospital, New York City. Price 21s. net.

A Manual of the Practice of Medicine. Prepared especially for Students. By A. A. Stevens, A.M., M.D., Professor of Therapeutics and Clinical Medicine in the Woman's Medical College of Pennsylvania, Lecturer on Physical Diagnosis in the University of Pennsylvania. Eighth edition, revised. Price 12s. 6d. net.

The Pancreas: its Surgery and Pathology. By A. W. Mayo Robson, D.Sc. (Leeds), F.R.C.S. Eng., London; and P. J. Cammidge, M.B. Lond., D.P.H. Camb., London. Price 21s. net.

WELLS GARDNER, DARTON AND CO., LIMITED, 3, Paternoster Buildings, and 44, Victoria-street, London.

A Book of Simple Remedies for Common Ailments. By Florence Stacpoole, Lecturer to the National Health Society. Part I. and Part II. Price, paper, 4d. each; cloth, 6d. each.

WILEY, JOHN, AND SONS, 43 and 45, East 19th Street, New York.

Immune Sera. A Concise Exposition of Our Present Knowledge concerning the Constitution and Mode of Action of Antitoxins, Agglutinins, Hæmolysins, Bacteriolysins, Precipitins, Cytotoxins, and Opsonins. By Dr. Charles Frederick Bolduan, Bacteriologist, Research Laboratory, Department of Health, City of New York. Second edition, rewritten. First thousand. Price $1.50.

WRIGHT, JOHN, AND CO., Bristol. (SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, London; WILLIAM WOOD AND CO., New York.)

An Index of Treatment. By Various Writers. Edited by Robert Hutchison, M.D., F.R.C.P., Physician to the London Hospital and Assistant Physician to the Hospital for Sick Children, Great Ormond-street, and H. Stansfield Collier, F.R.C.S., Surgeon to St. Mary's Hospital, Joint Lecturer on Surgery in St. Mary's Hospital Medical School, Surgeon to the Hospital for Sick Children Great Ormond-street. Price 21s. net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BERRY, CECIL, L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed House Surgeon to the Birkenhead and Wirral Children's Hospital, Birkenhead.

BINGHAM, R. G., M.R.C.S., L.R.C.P. Lond., has been appointed House Physician to Out-patients at St. Thomas's Hospital.

BRODRIBB, ARTHUR WILLIAMSON, M.B. Oxon., L.R.C.P., has been appointed Assistant Physician to the Hastings and East Sussex Hospital.

BUTLER, G. G., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Physician at St. Thomas's Hospital.

CHURCHILL, S., M.B., B.C. Cantab., has been appointed Resident House Physician at St. Thomas's Hospital.

CROSSFIELD, H. V., M.B., C.M. Glasg., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

GREEN, PHILIP, M.D., M.R.C.S., L.R.C.P., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

HARVEY, FRANK, M.R.C.S., L.S.A., has been re-appointed Medical Officer of Health of Padstow (Cornwall) for three years.

HENRY, F., M.B., Ch.B. Glasg., has been appointed Medical Superintendent of the Highfield Infirmary, Liverpool.

HUGGINS, G. M., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Surgeon at St. Thomas's Hospital.

LEGGETT, WILLIAM, M.B., Ch.B., B.A.O. Dub., has been appointed Senior Assistant Physician at Montrose Royal Asylum.

LOUGHBOROUGH, A. L., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Physician at St. Thomas's Hospital.

MCRAE, G. DOUGLAS, M.D., F.R.C.P. Edin., has been appointed Medical Superintendent of the Ayr District Asylum.

MURRAY, JOHN, M.B., B.Ch. Dub., F.R.C.S. Eng., has been appointed Surgeon to the Middlesex Hospital.

NEILD, F. M., M.B., B.S. Lond., has been appointed Resident House Surgeon at St. Thomas's Hospital.

NIGHTINGALE, H. J., M.B., B.S. Lond., has been appointed Resident House Surgeon at St. Thomas's Hospital.

PAGE, C. M., M.B., B.S. Lond., has been appointed Senior Casualty Officer to St. Thomas's Hospital.

PARSONS-SMITH, B. T., M.B., B.S. Lond., has been appointed House Physician to Out-patients at St. Thomas's Hospital.

PINCHIN, A. J. S., M.B., B.S. Lond., has been appointed House Physician to Out-patients at St. Thomas's Hospital.

POLLARD, ARTHUR HAIG, L.R.C.P., M.R.C.S., has been appointed House Physician to the Cheltenham General Hospital.

RICKETT, GERALD RUSSELL, M.B., B.C. Cantab., has been appointed Medical Officer of Health for the Sherborne (Dorset) Rural District.

STUART, EFFIE GORDON, M.B. Edin., has been appointed Assistant Resident Medical Officer at the Sheffield Union Infirmary.

SUTTON, W. H. R., M.B., B.C. Cantab., has been appointed Resident House Physician at St. Thomas's Hospital.

TAYLOR GORDON, M.B., M.S. Lond., F.R.C.S. Eng., has been appointed Assistant Surgeon to the Middlesex Hospital.

UNWIN, H. R., M.B., B.C. Cantab., has been appointed Resident House Surgeon at St. Thomas's Hospital.

WALKER, S. L., B.C. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Physician at St. Thomas's Hospital.

WEIR, H. B., M.R.C.S., L.R.C.P. Lond., has been appointed House Physician to Out-patients at St. Thomas's Hospital.

WHITEHEAD, C. E., M.R.C.S., L.R.C.P. Lond., has been appointed Junior Casualty Officer to St. Thomas's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Resident Surgical Officer. Salary £100 per annum.

BIRMINGHAM CITY ASYLUM.—Junior Assistant Medical Officer. Salary £150 per annum, with board lodging, and washing.

BOLINGBROKE HOSPITAL, Wandsworth Common.—Junior House Surgeon. Salary £75, with board, lodging, and washing.

BOOTLE BOROUGH HOSPITAL.—Junior House Surgeon. Salary £80 per annum, with board, residence, and laundry.

BRISTOL GENERAL HOSPITAL.—Senior House Surgeon. Salary £120 per annum, with board, residence, &c.

BRISTOL DISPENSARY.—Two Medical Officers.

CAMBRIDGE, ADDENBROOKE'S HOSPITAL.—Assistant House Surgeon. Salary £50 per annum, with board, residence, and laundry.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road.—Three honorary Registrars and two honorary Assistant Anæsthetists. Also House Surgeon, non-resident. Salary 40 guineas per annum.

EDINBURGH, UNIVERSITY OF.—Additional Examinerships in Materia Medica and Clinical Surgery.

EXETER, ROYAL DEVON AND EXETER HOSPITAL.—Assistant House Physician, unmarried. Salary £60 per annum, with board, lodging, and washing.

HULL ROYAL INFIRMARY.—Casualty House Surgeon. Salary at rate of £60 per annum for six months' appointment, or £80 per annum for 12 months, with board and lodging.

INDIA OFFICE, LONDON.—Sixteen Commissions in the Indian Medical Service.

LEAMINGTON, WARNEFORD, LEAMINGTON, AND SOUTH WARWICKSHIRE GENERAL HOSPITAL.—House Physician. Salary £60 per annum, with board, washing, and apartments.

LEEDS, CITY OF.—Assistant Medical Officer of Health and Chief Inspector of Nuisances. Salary £300 per annum.

LIVERPOOL HOSPITAL FOR CONSUMPTION, Sanatorium, Kingswood, Delamere Forest.—Resident Medical Officer. Salary £400 per annum, with house (unfurnished).

LIVERPOOL ROYAL INFIRMARY.—Honorary Assistant Surgeon.

LIVERPOOL STANLEY HOSPITAL.—Senior House Surgeon. Salary £90 per annum, with board, residence, and washing.

MANCHESTER UNIVERSITY.—Senior Demonstrator in Physiology. Salary £150, rising to £200 per annum.

MELTON, SUFFOLK DISTRICT ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £160, rising to £180, with board, apartments, attendance, and laundry.

MIDDLESBROUGH, NORTH RIDING INFIRMARY.—Assistant House Surgeon, unmarried. Salary £75 per year, with residence, board, and washing.

MILROY LECTURES ON STATE MEDICINE AND PUBLIC HEALTH.—Lecturer for 1909.

NORTHLEACH RURAL DISTRICT COUNCIL.—Medical Officer of Health. Salary £100 per annum, inclusive.

OLDHAM UNION.—Public Vaccinator.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—Weber-Parkes Prize of 150 guineas and two Silver Medals.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Medical Registrar, Surgical Registrar, Clinical Assistants, and Junior Obstetric Assistant (resident), all females. Also Assistant Physician.

SAINT LEONARD, SHOREDITCH, INFIRMARY AND WORKHOUSE.—Senior Assistant Medical Officer. Salary £150 per annum, with board, apartments, and washing.

SEAMEN'S HOSPITAL SOCIETY, Greenwich.—Medical Superintendent of the Dreadnought Hospital. Salary £200 per annum, with board. Also Surgical Registrar at the Dreadnought Hospital. Salary £50 per annum, with luncheon and tea.

SHEFFIELD ROYAL HOSPITAL.—Junior Resident Medical Officer, unmarried. Salary £50 per annum, with board, lodging, and washing.

STOCKPORT, COUNTY BOROUGH.—Medical Officer of Health. Salary £450 per annum, increasing to £550.

SWANSEA GENERAL AND EYE HOSPITAL.—House Surgeon. Salary £75.

VICTORIA HOSPITAL FOR CHILDREN, Tite-street, Chelsea, S.W.—Physician to Out-patients.

WEST LONDON HOSPITAL AND POST-GRADUATE COLLEGE, Hammersmith-road, W.—Clinical Assistants.

Births, Marriages, and Deaths.

BIRTHS.

HAIR.—On Nov. 30th, at 481, Holloway-road, N., to Dr. and Mrs. Allan Hair—a son.

JOHNSON.—On Nov. 27th, at Fairleigh, Eccles Old-road, Pendleton, Manchester, the wife of Dr. W. Cresby Johnson, of a daughter.

MARSHALL.—On Dec 1st, at St. John's House, Lechlade, Gloucestershire, the wife of Thomas Bingham Marshall, M.R.C.S., L.R.C.P., of a son.

WALLACE.—On Nov. 30th, at Cowhill-lane, Ashton-under-Lyne, the wife of Alexander Wallace, L.R.C.P., L.R.C.S.E., F.P.S.G., of twin daughters.

MARRIAGE.

BURNAND—CONDER.—On Nov. 28th, at St. Matthew's Church, Redhill Surrey, Eva Beatrice, youngest daughter of Mr. and Mrs. Lewis W. Burnand, to A. H. Conder, F.R.C.S.

DEATHS.

CLARKE.—On Nov. 27th, suddenly, of syncope, at Epsom College, Surrey, Alexander William Cameron, aged 14 years, only child of John L. Clarke, M.B., Holly House, Woolwich.

HOOPER.—On Nov. 24th, at Trinity-square, Borough, Daniel Hooper, B.A., M.B. Lond., in his 85th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

"QUACKS AND ABORTION."

SOME years ago—to be exact, in THE LANCET of Dec. 31st, 1898—we pilloried, in an article under the above heading, a person calling himself "Dr. Davis," of 309, Portobello-road, London, W. We had written for a box of his "Famous Female Pills," representing the writer as being desirous of obtaining pills for an obstinate case, as being a servant and unmarried, and asking for secrecy. The pills were mainly composed of iron and also gave the reactions characteristic of rhubarb. A correspondent has now forwarded to us a book by Davis entitled "Dr. Davis's Little Book for Married Ladies." This book, we have no hesitation in saying, is a filthy publication and should render Davis liable to prosecution under the Post Office Protection Act. It contains a variety of recipes for the prevention of conception and a chapter upon "Woman, Her Complaints," among which figures "Flour (*sic*) Albus." A list of causes of suppression of the menses "after they have once been regularly established," is given but, oddly enough, pregnancy is not mentioned in the list. This paragraph concludes, "for all cases arising from suppression there is no remedy known that will act so quickly, beneficially, and effectually as the FAMOUS FEMALE PILLS; they are simply unequalled, but they must be continued regularly until the flow of the menses is freely, fully, and regularly established." As by far the commonest cause of suppression of the menses is pregnancy, and as every woman knows this perfectly well, it is quite obvious that Davis wishes his dupes to understand that the taking of his pills will bring about abortion. That they probably will not do so is beside the question, but it is in addition incorrect to say that pills consisting mainly of iron will restore the menstrual flow in "all cases arising from suppression." We think that Davis's abominable little book should be brought to the notice of the Postmaster-General and the police. He is given in the Post Office Directory under Portobello-road as "309, Davis, Henry, ptnt. medcn. vendr."

A MEDICAL MAN'S EVIDENCE.

To the Editors of THE LANCET.

SIRS,—I was called to give evidence at the Hackney coroner's court on Saturday last, Nov. 30th, in respect of the death of Rose Annie Page, aged eight years, who was brought into the Metropolitan Hospital on Tuesday, Nov. 26th, in a moribund condition and who died within a few minutes of admission. The history of the case was that the child had had otorrhœa for about 18 months from the right ear and that she was apparently well otherwise up to Sunday, Nov. 24th. She was playing at diabolo on that day in the afternoon when the wooden spool fell on her head; the mother thought "on the left side of her head." Nothing apparently was noticed till early Monday morning, Nov. 25th, when she began to vomit, and this was continued through most of the day. She gradually got worse and the mother stated that she noticed her daughter "get twitchings." She was brought to the hospital on the Tuesday (next day), when she died. The necropsy revealed otorrhœa of the right ear, necrosis of the tegmen tympani, with inflammation of the membranes immediately around this, and an abscess in the temporosphenoidal lobe immediately above the necrosed tegmen. The evidence given by me was that death was due to meningitis and cerebral abscess from otorrhœa, and had nothing, in my opinion, to do with the fall of the spool of the diabolo. In spite of this the verdict of "Accidental death" was passed by the jury and acquiesced in by the coroner.—I am, Sirs, yours faithfully,

SYDNEY VOSPER,
Assistant House Surgeon, Metropolitan Hospital, N.E.

Dec. 4th, 1907.

*** Our correspondent's account of the case certainly seems to show that playing diabolo on Sunday had nothing to do with the case. —ED. L.

TUBERCULOSIS IN QUEENSLAND.

THE report for the year ending June 30th, 1907, of the medical officer of the Jubilee Sanatorium, Dalby (Dr. A. Stewart), to the Under Secretary, Home Secretary's Department, Brisbane, is interesting in some of its details. The 76 cases are tabulated according to the classification of Turban, but in short they amount to 22 cured, 22 improved, 31 *in statu quo*, and one death. "The word cured," says Dr. Stewart, "is here used as being the most expressive word, and means that all the active signs are in abeyance, that there is a cessation of cough and expectoration, and that the patient is able to earn his living. The word arrested is not used for such cases, because in some institutions in England patients are discharged as arrested who still spit, and the expectoration contains tubercle bacilli." He continues: "The cured cases had an average residence of 121·9 days and their average increase in weight was 16·8 pounds, the highest weight gained being 38 pounds and the lowest 3¼ pounds. The average residence in the improved cases was 138·9 days and their average increase in weight 14·9 pounds." Dr Stewart says in a footnote: "In eight of the improved cases above recorded, though the signs were quiescent, they still coughed and spat a little on rising in the morning but were able to do a hard day's work. In German sanatoria these cases would be discharged as 'erwerbsfähig,' and it is to be regretted that this expressive word could not be universally adopted so as to include cured, arrested, and quiescent cases."

INCOME TAX.

To the Editors of THE LANCET.

SIRS,—The surveyor of taxes informs me at this eleventh hour that my return of income tax should have been made as a joint return of the income of myself and my partner. He states that this is demanded by the provisions of the Financial Act, 1907. Formerly we have always returned our incomes separately—a procedure hitherto allowable. Can you inform me if the surveyor is right in this insistence? If so, a serious difficulty is introduced into the framing of these returns, because it is a common custom in medical partnerships for stable expenses to be regulated and paid by the individual partners (as in the case of my partnership), while stable expenses form the largest item of working expenses in any medical practice. Can your advisers suggest any method of estimate by which this difficulty can be met?

I am, Sirs, yours faithfully,
Nov. 30th, 1907. M. R.

*** We believe that what the surveyor says is right. Even if the surveyor does insist on having a statement of the profits of the partnership and assesses the tax on those profits collectively, each partner may individually claim back the tax on his proportion of profits if his income from every source is £160 or under, or, if over £160, then he may claim the usual abatements. We think that if a balance-sheet of the partnership was produced to the surveyor, showing the proportion due to each partner, and also a statement of any income arising to the parties from any other sources, the surveyor would put the matter right and allow separate assessments. The stable expenses of the partners can be put together in the partnership account and the item subsequently split up between them as agreed.—ED. L.

To the Editors of THE LANCET.

SIRS,—In reference to your editorial answer to "Medico" on Nov. 30th, on taking over my present practice I was assessed at one-third more than my gross professional income. I appealed to the local commissioners. One interesting result was that I received much sympathy from my neighbours and advice as to keeping out of the workhouse. The following year I proposed to appeal to the special commissioners and was informed by the surveyor of taxes that for a small income such as mine it was impossible.

I am, Sirs, yours faithfully,
Nov. 30th, 1907. TAXED.

THE SCIENCE OF PRESCRIBING DIET.

WE have received from several correspondents a request for further information in regard to the method of prescribing diet which was described in an annotation under the above heading in our issue last week. The original paper by Professor Irving Fisher, professor of political economy at Yale University, on the practical application of the method appeared in the *Journal of the American Medical Association*, April 20th, 1907, vol. xlviii., pp. 1316–24, and reprints of it are published by the American Medical Association Press at 103, Dearborn-avenue, Chicago. Professor Fisher states that there is no patent on his device and anyone is free to make and to use it. The Battle Creek Sanatorium has had experience in constructing the apparatus and it is added that "a regular instrument maker may take up its manufacture later if conditions warrant."

STAMMERING.

To the Editors of THE LANCET.

SIRS,—Can any of your readers recommend a school where a boy can be cured of stammering? It is very pronounced of late and his parents are willing to do anything in their power for him.

I am, Sirs, yours faithfully,
Pontypool, Nov. 28th, 1907. R. W. HASLETT, F.R.C.S.Irel.

CRUELTY TO CHILDREN.

THE annual report of the Birmingham branch of the National Society for the Prevention of Cruelty to Children contains sad and also satisfactory points. It is sad, indeed, to find that during the year 1906–07 the society's officers found it necessary to interfere in 1028 cases affecting over 3500 children. On the other hand, it is eminently satisfactory to find that the efforts of the society induced the majority of the parents to cease or to moderate their unnatural cruelty, and in 39 cases only was it necessary to appeal to the law. The committee of the branch states that only one-third of the cases are directly attributable to drink but it asserts that it is well known to the committee and its inspectors that drink is a contributory cause in the majority of cases.

Major G. Lionel B. Killick, secretary to the Royal Maternity Charity, writes: "We are trying to build up a reference library for the midwives of the Royal Maternity Charity of London, to be kept in their waiting room at the offices in Finsbury-square, and the committee would be very grateful to any of your readers if they would be kind

enough to spare any books from their libraries, preferably on matters obstetrical and the care of infants."

Premature Decay.—All authorities acknowledge the possible paternity of a man of 60; indeed, we take it to be a matter of common knowledge. The possibilities of procreation in each individual case depend upon the fertility of both parties. If they have lived long in childless wedlock the chance of procreation is probably not great. We refer our correspondent to Taylor's "Medical Jurisprudence," vol. ii., pp. 11 and 12.

A. B. C. (Sacramento, Cal.)—Most medical men in England are addressed by the public as "Doctor" but academically the title belongs to those who hold a degree of Doctor of Medicine of a recognised university. Our correspondent will find the inconvenient situation fully dealt with in many articles in THE LANCET, to one of which we give reference (August 17th, 1895, p. 412).

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (9th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (3 P.M.), St. Mark's (2.30 P.M.).

TUESDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (2 P.M., Ophthalmic, 2.15 P.M.), Tottenham (2.30 P.M.).

WEDNESDAY (11th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30). P.M.

THURSDAY (12th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (2.30 P.M.), Tottenham (Gynæcological, 2.30 P.M.).

FRIDAY (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golder-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.).

SATURDAY (14th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (9th).—MEDICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8 P.M.: Council. 8.30 P.M.: Discussion on Pneumococcus Infections (introduced by Prof. Wm. Osler).

SOCIETY OF ARTS (John-street, Adelphi, W.C.).—8 P.M.: Cantor Lecture:—Mr. C. Beck: The Theory of the Microscope.

TUESDAY (10th).—PHARMACEUTICAL SOCIETY OF GREAT BRITAIN (17, Bloomsbury-square, W.C.).—8 P.M.: Discussion on the Limits of Error in Chemical Standards (opened by Mr. D. L. Howard).

ROYAL SOCIETY OF MEDICINE (SURGICAL SECTION) (20, Hanover-square, W.).—5.30 P.M.: Papers:—Mr. B. G. A. Moynihan: A Case of Complete Gastrectomy.—Mr. J. D. Malcolm: Cases of Complete Removal of the Gall Bladder.

WEDNESDAY (11th).—BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY (20, Hanover-square, W.).—5.30 P.M.: Paper:—Dr. Edgecombe (Harrogate) Blood Pressure in Spa Practice.

SOCIETY OF ARTS (John-street, Adelphi, W.C.).—8 P.M.: Aldred Lecture:—Sir William Ramsay, K.C.B.: Radio Active Phenomena.

THURSDAY (12th).—ROYAL SOCIETY OF MEDICINE (OBSTETRICAL AND GYNÆCOLOGICAL SECTION) (20, Hanover-square, W.).—7.45 P.M.: Specimens will be shown by Dr. C. H. Roberts, Dr. P. Horrocks, Dr. J. Oliver, Dr. H. T. Hicks, and Dr. Lewers. Paper:—Dr. W. E. Fothergill: The Supports of the Pelvic Viscera, a Review of some Recent Contributions to Pelvic Anatomy with a Clinical Introduction.

HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne-street, Edgware-road, W.).—Papers:—Mr. L. Paton: The Diagnosis and Treatment of Some Forms of Simple Conjunctivitis.—Mr. W. F. Fedden: Congenital Talipes.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-square, W.).—8 P.M.: Card Cases: Mr. E. J. Smyth, Mr. S. Mayou, &c. 8.30 P.M.: Papers:—Mr. S. Snell and Mr. E. Nettleship.

CHILD-STUDY SOCIETY (Parkes Museum, Margaret-street, W.).—8 P.M.: Lecture:—Dr. F. Warner: Constitutional Development and Social Progress of Boys and Girls from Infancy.

FRIDAY (13th).—ROYAL SOCIETY OF MEDICINE (CLINICAL SECTION) (20, Hanover-square, W.)—8.30 P.M.: Exhibition of Cases by Dr E. Reid, Prof. W. Osler, Mr. T. H. Openshaw, Dr. F. P. Weber, Dr. W. E. Wynter, Dr. W. Pasteur, and Dr. F. J. Poynton. The patients will be in attendance at 8 P.M.

SOCIETY OF ARTS (John-street, Adelphi, W.C.).—8 P.M. Shaw Lecture:—Prof. T. Oliver: Industrial Poisons—Lead and Phosphorus, with Special Reference to the Manufacture of Lucifer Matches.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN (11, Chandos-street, Cavendish square, W.).—5 P.M.: Special Meeting. Discussion on Inherited Syphilis (opened by Mr. C. Lucas). Followed by Dr. Adamson, Dr. L. Guthrie, Dr. G. Carpenter, Mr. G. Pernet, Mr. S. Stephenson, Mr. A. H. Tubby, and others.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (9th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W.).—2 P.M.: Medical and Surgical Clinics. Mr. Dunn: Diseases of the Eye. 2.30 P.M.: Operations. X Rays.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Dr. J. H. Sequeira: Clinique. (Skin.) 5.15 P.M.: Lecture:—Dr. J. Mackenzie (Burnley): The Principles of Treatment in Heart Disease.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Prince of Wales's General Hospital, Tottenham, N.).—Cliniques:—10 A.M.: Surgical Out-patient (Mr. H. Evans). 2.30 P.M.: Medical Out-patient (Dr. T. R. Whipham); Throat, Nose, and Ear (Mr. H. W. Carson); X Ray (Dr. A. H. Pirie); 4.30 P.M.: Medical In-patient (Dr. A. J. Whiting).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.15 P.M.: Sir Dyce Duckworth: Medicine. 2.30 P.M.: Operations. 3.15 P.M.: Mr. W. Turner: Surgery. 4 P.M.: Dr. St Clair Thomson: Ear and Throat. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Ear and Throat. 2.15 P.M.: Special Lecture:—Sir Dyce Duckworth: Aortic Aneurysms.

GREAT NORTHERN CENTRAL HOSPITAL (Holloway-road, N.).—9 A.M.: Operations. 2.30 P.M.: In-patients—Medical (Dr. Beevor); Out-patients—Medical (Dr. Willcox), Surgical (Mr. Low), Eye (Mr. Morton and Mr. Coates).

HOSPITAL FOR DISEASES OF THE SKIN (52, Stamford-street, Blackfriars, S.E.).—5 P.M.: Lecture:—Mr. T. J. P. Hartigan: Tumours Innocent.

ROYAL DENTAL HOSPITAL AND LONDON SCHOOL OF DENTAL SURGERY (Leicester-square, W.C.).—5.30 P.M.: Mr. J. G. Turner: The Etiology of Palatal Deformities.

KING'S COLLEGE (UNIVERSITY OF LONDON) (Physiological Theatre, King's College, Strand, W.C.).—4.30 P.M.: Lecture:—Dr. O. Rosenheim: The Borderland of Animal and Vegetable Chemistry (Proteins, Lecithins, Pigments, &c.).

TUESDAY (10th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. M. Moullin: Gynæcological Operations. 2 P.M.: Medical and Surgical Clinics. Dr. Ball: Diseases of the Throat, Nose, and Ear. 2.30 P.M.: Operations. X Rays. Dr. Abraham: Diseases of the Skin.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Dr. J. W. Carr: Clinique. (Medical.) 5.15 P.M.: Lecture: Dr. M. C. Hawkes: Swedish Medical Gymnastics, their Application in the Treatment of Disorders of the Digestive System.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Prince of Wales's General Hospital, Tottenham, N.).—Clinique:—10.30 A.M.: Medical Out-patient (Dr. A. G. Auld). 2.30 P.M.: Surgical Operations (Mr. Carson). Cliniques:—Surgical Out-patient (Mr. Edmunds); Gynæcological (Dr. A. E. Giles). 4.30 P.M.: Lecture:—Dr. B. Price: Clinical Value of Sputum Examination.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.15 P.M.: Dr. R. T. Hewlett: Medicine. 2.30 P.M.: Operations. 3.15 P.M.: Mr. Carless: Surgery. 4 P.M.: Mr. M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Skin.

GREAT NORTHERN CENTRAL HOSPITAL (Holloway-road, N.).—2.30 P.M.: In-patients—Medical (Dr. Beale), Throat and Ear (Mr. Waggett); Out-patients—Surgical (Mr. Edmunds), Throat and Ear (Mr. French); Operations (Mr. Beale).

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M.: Clinical Lecture:—Dr. Batten: Anterior Poliomyelitis.

WEDNESDAY (11th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Ball: Diseases of the Throat, Nose, and Ear. Dr. Saunders: Diseases of Children. 2 P.M.: Medical and Surgical Clinics. Dr. K. Scott: Diseases of Eye. 2.30 P.M.: Operations. X Rays. Dr. Robinson: Diseases of Women.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. T. P. Legg: Clinique. (Surgical.) 5.15 P.M.: Lecture: Dr. L. Guthrie: Precocious Development.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Prince of Wales's General Hospital, Tottenham, N.).—Cliniques:—2.30 P.M.: Medical Out-patient (Dr. Whipham); Dermatological (Dr. G. N. Meachen); Ophthalmological (Mr. R. P. Brooks).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.15 P.M.: Dr. F. Taylor: Medicine. 2.30 P.M.: Operations. 3.30 P.M.: Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 11 A.M.: Eye.

GREAT NORTHERN CENTRAL HOSPITAL (Holloway-road, N.).—2.30 P.M.: In-patients—Surgical (Mr. Stabb); Out-patients—Medical (Dr. Horder), Gynæcological (Dr. Lockyer), Skin (Dr. Whitfield), Teeth (Mr. Baly); Operations (Mr. Stabb).

HOSPITAL FOR DISEASES OF THE SKIN (52, Stamford-street, Blackfriars, S.E.).—5 P.M.: Lecture:—Mr. T. J. P. Hartigan: Tumours Innocent.

THURSDAY (12th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. Mr. Dunn: Diseases of the Eye. 2.30 P.M.: Operations. X Rays.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. Hutchinson: Clinique. (Surgical.)

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Prince of Wales's General Hospital, Tottenham, N.).—2.30 P.M.: Gynæcological Operations (Dr. Giles). Cliniques:—Medical Out-patient (Dr. Whiting); Surgical Out-patient (Mr. Carson); X Ray (Dr. Pirie). 3 P.M.: Medical In-patient (Dr. G. P. Chappel). 4.30 P.M.: Lecture:—Dr. A. G. Auld: Varieties of Cough, their Diagnosis and Treatment.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.15 P.M.: Dr. G. Rankin: Medicine. 2.30 P.M.: Operations. 3.15 P.M.: Sir W. Bennett: Surgery. 4 P.M.: Mr. M. Davidson: Radiography. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Ear and Throat.

GREAT NORTHERN CENTRAL HOSPITAL (Holloway-road, N.).—2.30 P.M.: In-patients—Medical (Dr. Morison).

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—6 P.M.: Chesterfield Lecture:—Dr. M. Dockrell: Fungous Diseases of the Hair: III., Favus; IV., Leptothrix.

CHARING CROSS HOSPITAL.—3 P.M.: Demonstration:—Dr. Galloway and Dr. MacLeod: Diseases of the Skin. 4 P.M.: Demonstration:—Dr. Bosanquet: Medical. (Post-Graduate Course.)

HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M.: Lecture:—Mr. Fairbank: Congenital Dislocation of the Hip and its Treatment.

FRIDAY (13th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. M. Moullin: Gynæcological Operations. 2 P.M.: Medical and Surgical Clinics. Dr. Ball: Diseases of the Throat, Nose, and Ear. 2.30 P.M.: Operations. X Rays. Dr. Abraham: Diseases of the Skin.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. M. Yearsley: Clinique. (Ear.)

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Prince of Wales's General Hospital, Tottenham, N.).—10 A.M.: Clinique:—Surgical Out-patient (Mr. H. Evans). 2.30 P.M.: Surgical Operations (Mr. Edmunds). Cliniques:—Medical Out-patient (Dr. Auld); Eye (Mr. Brooks). 3 P.M.: Medical In-patient (Dr. M. Leslie).

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.15 P.M.: Dr. R. Bradford: Medicine. 2.30 P.M.: Operations. 3.15 P.M.: Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Skin.

GREAT NORTHERN CENTRAL HOSPITAL (Holloway-road, N.).—3 P.M.: Clinical Lecture:—Dr. A. Morison: On Sleep and Sleeplessness.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M.: Clinical Lecture:—Dr. Batten: Paraplegia.

SATURDAY (14th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Ball: Diseases of the Throat, Nose, and Ear. 2 P.M.: Medical and Surgical Clinics. Dr. K. Scott: Diseases of Eye. 2.30 P.M.: Operations. X Rays. Dr. Robinson: Diseases of Women.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich.)—2.30 P.M.: Operations. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 11 A.M.: Eye.

HOSPITAL FOR DISEASES OF THE SKIN (52, Stamford-street, Blackfriars, S.E.).—5 P.M.: Lecture:—Mr. T. J. P. Hartigan: Tumours Malignant.

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(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 5th, 1907.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Nov. 29	30·10	S.W.	0·01	58	57	42	43	43	Foggy
,, 30	30·42	N.	...	56	45	35	36	36	Fine
Dec. 1	30·24	N.E.	...	59	47	36	40	43	Cloudy
,, 2	29·90	S.W.	...	59	52	38	42	43	Overcast
,, 3	29·37	S.W.	0·15	56	47	40	46	47	Overcast
,, 4	29·46	S.W.	...	55	53	38	40	42	Overcast
,, 5	29·09	W.	0·12	57	46	42	42	42	Cloudy

During the week marked copies of the following newspapers have been received:—*Liverpool Post, Morning Post, Daily News, Daily Graphic, Tribune, Standard, Sheffield Independent, Manchester Dispatch, Westminster Gazette, Manchester Courier, Coventry Times, Manchester Evening News, Newcastle Daily Chronicle, British Journal of Nursing, Birmingham Post, Leeds Mercury, Westminster Gazette, Nottingham Express, Indian Daily News, Clacton-on-Sea Graphic, North Mail, &c.*

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